II—A REVISION OF THE AMERICAN GENERA OF THE TENEBRIONID TRIBE ASIDINI.

In publishing the following study, it is primarily with regret that so many of the described species are still unknown to me. After using every endeavor to bring together as full and representative a series as could be obtained, through the generous and substantial aid of several well-known collectors, I find quite a number of the aberrant forms described by LeConte and Horn still missing, and the proper assignment of these species in the taxonomic scheme here proposed has in many instances been largely a matter of inference; but it is hoped, at any rate, that the original descriptions of these desiderata, which are given in nearly every instance, may render this revision at least of some utility in bringing these scattered descriptions together for convenient reference. Although actually numerous, the number of missing species is however proportionally very small, for in the following pages 212 species and subspecies are listed, excluding 10 described from Mexico, of which only 60 species and subspecies, known and unknown to me, had been previously described, an increase of about three and one-half fold. Those still unknown to me in nature will probably remain so for many years, owing to their extremely local range and the exceptional rarity of most of them; the type of Microschatia sulcipennis, for example, has remained a unique since it was originally described about half a century ago.

In the Asidini the body is large to moderately small in size and with great variety of sculpture, from amost perfectly smooth to very rough; the elytra are frequently costate and the integuments often coated with so dense a crust of earthy matter that it is impossible to remove it, this crust really becoming almost a part of the integument, through which the short bristles protrude regularly and without detriment to their tactile function. The head is inserted to the eyes, which are very transverse, more or less coarsely faceted and generally convex; but they may become nearly flat and extremely short as in *Pycnonotida*, and, in the *convexicollis*

group of Euschides they become notably larger and less transverse; their anterior margin varies from evenly and broadly arcuate, as in Glyptasida and Pelecyphorus, to broadly sinuate somewhat below the middle as in Euschides and the other genera of that part of the series, and in the very aberrant Litasida it becomes more deeply sinuate. The epistoma is sinuato-truncate, the labrum well developed, generally sinuate at the middle of the apex, the mandibles thick, externally punctate and puberulent basally, rather rapidly acuminate and nude apically and with the tip invariably bifid. The antennæ are rather short, as a rule, with joints nine and ten, or sometimes only the tenth, wider, the eleventh always smaller and more or less imbedded in the concave apex of the tenth, although as a singular exception the European Globasida Escal., has the eleventh joint almost as large as the tenth and perfectly free though closely joined to the tenth along a broad base; this remarkable character may however be to some extent sexual, as the female is not in my collection at present. The depressed patches of tomentum on the apex of the tenth joint and involving the entire apex of the eleventh are constantly present. The mentum is large to moderate in size, narrowed toward base or transversely subquadrate. inserted upon a distinct gular extension or pedestal or not, its apex transverse and medially sinuate; it may fill the entire buccal opening. cover all the mouth organs and closely fit against the closed mandibles as in Astrotus, or leave most of the mouth parts exposed at its sides and apex as in Euschides and many other genera. The prothorax is always much wider than the head and sinuate at apex. with more or less anteriorly prominent angles and it is nearly always narrower than the elytra, the latter generally widely, or better perhaps, deeply, embracing the sides of the body beneath. though narrowly so in a few cases such as Microschatia and related genera, Litasida and the European Asida hesperica, which, on this account, should probably be separated generically. In Pelecyphorus the hind body is often greatly inflated when compared with the anterior parts. The legs are comparatively thin and relatively weak, giving slow and heavy movements in locomotion; the coxæ are transversely oval to subglobular and the tibial spurs short. The trochantin is inconstant, usually large and distinct but sometimes wholly obsolete, as noted in the table given below.

As is well known, our territories west of the 100th meridian are very broken, and include many isolated mountain crests and valleys having between them no direct communication. Within these local environments primitive stocks become modified in the course of time, and if the isolation has been sufficiently long continued and the evolutionary stimuli potent enough, may result in forms so distinct as to demand recognition as subspecies, species or even genera, as in the case of the animals and plants now inhabiting the islands off the coast of California. Reviewers of the Coleoptera as a rule have not sufficiently considered these facts, generally holding such heterogeneity in their material to be due simply to fortuitous variation because of inherent plasticity, whereas in reality true variation is a term properly applicable only to departures from the mean among individuals inhabiting a common environment. I find that this kind of inconstancy or instability characterizes the species of Tenebrionidæ but little more than it does the Carabidæ for instance,* for in all cases where it has been possible to secure series of individuals taken together in the same locality, no divergence sufficiently notable to give rise to doubt as to specific status can be observed among the material serving as the basis of this revision. Each species may have some particular character which is especially variable, such as the longitudinal extent of the reflexed elytral margin in the males of Asidopsis cochisensis, for example, though the summation of features constituting facies or habitus remains quite fixed.

Having gradually accumulated my rather extensive material in the Asidini from many collectors, each of whom has generally sent but one or two examples from his series of any particular species, it naturally results that a large proportion of the forms now making up this material must be in uniques, so far as my collection is concerned. This is of course the condition to greater or less degree

* Individual instability in the Tenebrionidæ is admittedly somewhat more obvious than in such a family as the Carabidæ, as indicated by the greater inconstancy of form, as well as by the evidently greater tendency of the species to become modified by altered environmental conditions. I have, for example, found *Harpalus caliginosus* represented by absolutely similar individuals on the Atlantic coast and in the mountains of northern California. More recently evolved types of animals incline to plasticity and instability to a greater degree than older and more established types, and this is therefore an additional reason for considering the Tenebrionidæ a comparatively recent development in the Coleoptera, as stated further on by way of other reasoning.

with all the larger collections, and in all other families as well as the Tenebrionidæ, and in arranging these collections into species, assortments of more or less discordant individuals are usually placed under a single specific name, under the assumption that the exceptional forms are merely accidental variations. As the departures from the normal or typical are particularly numerous in the Tenebrionidæ, it has been too hastily assumed that that family is especially subject to inconstancy or plasticity affecting outline, sculpture and other characters, which may be of a more definitive nature elsewhere, overlooking the fact that the Tenebrionidæ inhabit almost exclusively dry and arid mountainous regions having extremely varied environments, which alone should account for the observed incongruities. A similar multiplication of closely allied forms is, in greater or less degree, noticeable in most of the families inhabiting such regions. As above intimated this is not variation as understood in the Darwinian theory of evolution, though frequently so misconstrued; it is evolution through isolation, which is by far the most universal method of species forming. When the process has not proceeded very far the resulting forms are frequently termed incipient species; I have here designated them subspecies, but it must be clearly understood that the exact status of these departures from the normal is by no means certain, or ascertainable through our present sources of information.

In reviewing what has been accomplished in the taxonomy of the Asidini thus far, we are forced to acknowledge a certain superficiality of observation, which has contented itself by characterizing its primary genus as one of those "polymorphous aggregates," occasionally intruding themselves to vex us in our course of classification by way of preconceived methods, or by systems of generic differentiation applicable elsewhere in the series. An exceptionally erratic, and I am sure considerably overestimated, inconstancy of the species has been generally maintained, as before stated, so that virtually the only forms described thus far, excepting a few early discriminative efforts on the part of LeConte,—subsequently degraded or lost in the limbo of synonymy,—are very widely separated and uncorrelated species. On studying these isolated landmarks, with due regard to their comparative structural characters, the fact becomes evident that what have been put forward ostensibly

as species of a single genus in our fauna, are for the most part in actuality so many generic or quasi-subgeneric types, the real species and subspecies being, as a general rule, these so-called erratic variations. The complete proof of this is certainly to be seen in manifold instances in the material now in hand, and, among other things, it proves some of the early conceptions of our predecessors, such as the taking on or loss of granules and other permanent modifications of the chitinous exoskeleton, or the transformation of one widely distinct species into another, as a consequence respectively of seasonal change or through stages of true variation (Horn—Rev. Ten., pp. 284, 287,—under *Asida actuosa* and *A. captiosa*; also, recently, Proc. Cal. Acad. Sci., ser. 2, IV, p. 345—under *Edrotes*) to be visionary and unwarrantable.

In accordance with the observations and reasoning above stated, I here suggest the following scheme of genera of the tribe Asidini, so far as known to me at present, those which are foreign to America being indicated by the asterisk. Under the apparently prevailing opinion of systematists regarding generic and specific weight in the Coleoptera, most of them will probably be held to be rather subgenera than genera and in a very few cases this may quite possibly be true, but the large majority of them are, in the opinion of the writer, as definite as those now acknowledged by general consensus to be valid in almost any other section of the Tenebrionidæ:

Mentum entirely filling the buccal opening and without trace of pedestal: body generally coated densely with earthy matter......3
Mentum not entirely filling the buccal opening and always placed upon a more or less evident pedestal formed by a gular prolongation....4

Mentum closely fitted to the sides of the buccal opening, completely concealing the ligula and nearly or quite attaining the closed mandibles; elytra with straight and fine dorsal ridges and side margin; prosternum deflexed posteriorly. [Type S. graciliformis Sol.].

Stenosides

4-Ligula small, generally flat, angularly emarginate to subtruncate

and strongly retractile, usually almost or quite hidden under the mentum, the latter always clearly separated from the closed
mandibles
Ligula larger, tumid, angularly incised; mentum always separated from
the closed mandibles, generally also leaving the maxillary cardo in
considerable part exposed10
5—Last joint of the maxillary palpi small in both sexes, as in the pre-
ceding genera, and never larger and scalene in the male; body
roughly and irregularly sculptured but only occasionally coated
with earthy matter6
Last joint of the maxillary palpi large and scalene in the male, smaller
and recti-triangular in the female; prosternum deflexed; body di-
versely sculptured though generally clean, very much larger in size7
6—Trochantin minute; prosternal process deflexed between the coxæ;
head and prothorax relatively small; antennæ and tarsi slender;
elytra with anastomosing ridges, rather widely inflexed beneath.
[Type Asida anastomosis Say]. (Ologlyptus Lac.)Pactostoma
Trochantin well developed; prosternal process porrect; head and pro-
thorax relatively large; body very convex, generally roughly and
unevenly sculptured, the elytra narrowly inflexed beneath; antennæ
and tarsi stout. [Type Microschatia inaqualis Lec.] Pycnonotida
Trochantin, antennæ, tarsi and prosternal process nearly as in Pycnono-
tida; mentum broader, extending beyond the sides of the buccal
opening anteriorly; labrum much more deeply sinuate; body less
convex, smoother, the elytra with nearly regular rows of coarse
punctures, sometimes sulcate. [Type M. punctata Sol.].
Microschatia
7—Tarsi with short and inconspicuous spiniform hairs beneath8
Tarsi with very long, decumbent and conspicuous fulvous pubescence
beneath9
8—Base of the prothoray broadly bisinuate; elytra each with two dis-
tinct and subequal discal costæ. [Type Pelecyphorus sordidus Lec.].
Glyptasida
Base of the prothorax truncate or arcuato-truncate, the basal angles more
or less acute and prominent but more minutely and less posteriorly
or less acute and prominent but more minutely and less posteriorly so than in <i>Glyptasida</i> , the head and prothorax generally smaller
so than in Glyptasida, the head and prothorax generally smaller
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Last joint of the maxillary palpi differing but little sexually, never more
than recti-triangular in the male
12—Base of the prothorax bisinuate, the basal angles acutely and pos-
teriorly prominent
Base of the prothorax more or less conspicuously and broadly lobed,
becoming anteriorly oblique toward the sides, with the basal angles
obtuse, sometimes evident but never prominent14
13—Elytra coarsely clathrate in about three series on each, the lines of
separation scarcely at all costiform, the humeri obtusely rounded,
not reflexed; anterior parts small when compared with the hind body
as in Pelecyphorus, the prothorax sinuately constricted basally;
antennæ with sparse thin hairs, silvery in the type. [Type Asida
clathrata Champ.]*Bothrasida
Elytrà having confused sculpture, with about three feeble ridges usually
discernible on each, the two inner ridges frequently geminate, espec-
ially in the male; humeri obtuse but distinct, not broadly rounded,
generally in great part covered by the thoracic angles; body more
parallel and with relatively larger anterior parts as a rule; antennæ
bariance and with relatively larger affection parts as a rule, affecting
herissate with stiff spinuliform dark hairs. [Type N. abstrusa
n. sp.]*Notiasida
Elytra each with three very regular ridges or carinæ, the inner carina
rarely becoming obsolete and the outer generally not attaining the
base; thoracic and sometimes also the elytral base fringed with dense
pale tomentum; body parallel or with the elytra but feebly inflated;
antennæ as in Notiasida. [Type P. laciniata n. sp.] Parasida
14—Body more or less large in size, elongate, convex and fusoid-cylindric
or broadening posteriorly, clean and never incrusted with earthy
matter, the mentum rather small as a rule though variable, usually
not attaining the sides of the buccal opening; antennæ herissate
with stiff hairs; tarsi with short sparse spinules beneath; elytral
margin very variable, the surface smooth to costate. [Type E.
obovatus Lec.]Euschides
15—Antennæ unusually long, very gradually and evenly thickened to
the end of the tenth joint, the latter wholly spongiose at tip by
coalescence of the tomentose areas; anterior tibiæ scarcely at all
prominent externally at tip, the tarsi spinulose beneath; elytra with
true cariniform costæ though at the sides only. [Type Pelecyphorus
bifurcus Lec.]
Antennæ more rapidly enlarged distally, the tenth joint with the usual
two widely separated tomentose spots at tip16
16—Elytra with true costæ, which are sharply elevated and cariniform,
confined however to the lateral part of the upper surface as in
Heterasida; body parallel to narrowly suboval, depressed on the
Treterastaa, body paraner to narrowly subovar, depressed on the
upper surface and with minute and inconspicuous hairs; anterior
tibiæ not or scarcely serrulate externally, the outer angle moderately
to scarcely at all everted; antennæ more or less slender, gradually
enlarged subapically through joints nine and ten; mentum strongly
transverse, in close contact with the sides of the buccal opening,
which are unusually short. [Type Pelecyphorus parallelus Lec.].
Asidina

- Elytra without true costæ, the elevated lines when present having more the nature of narrowed and accentuated obtuse ridges......17 17—Body more or less evidently pubescent, the mentum rather small, loosely fitted in the buccal opening, with free space at the sides, the gular pedestal long and well developed; antennæ very slender, with the tenth joint abruptly wider, nearly as in normal European Asida; basal angles of the prothorax never prominent; anterior tibiæ generally serrulate externally, the outer angle at tip strongly everted and very acutely spiniform. [Type Pelecyphorus hirsutus Lec.]. Body evidently pubescent but with the hairs short, and not simple as in the preceding genus but peculiarly modified; prothorax nearly similar in general form but with sides very broadly reflexed, somewhat as in Embaphion; elytra nearly flat, acutely margined at the Body glabrous or virtually so; thoracic angles variable...........18 18—Elytra very narrowly inflexed beneath as in Microschatia, forming narrow epipleura,* the body moderately convex, rather small in size, smooth, with strongly reflexed margins; anterior tibiæ very moderately everted externally at apex, spinulo-serrate on the inner but not the outer edge; tarsi unusually long; mentum and palpi nearly as in Trichiasida, the antennæ thicker, gradually enlarged distally through joints eight to ten, the latter not abruptly wider; trochantin obsolete. [Type L. townsendi n. sp.].....*Litasida Elytra widely or deeply inflexed at the sides beneath as usual.....19 19-Mentum rather small, leaving much void space between it and the sides of the buccal opening as a rule, the gular pedestal rather long and but moderately wide; body small or moderate in size; anterior tibiæ more or less strongly everted and acute externally at apex, the external edge generally somewhat spinulo-serrate; tarsi moderately long, slender, with short spiniform setæ beneath; antennæ rather stout to moderately slender, well developed, usually gradually enlarged distally. [Type Asida opaca Say]......Asidopsis Mentum much larger, tightly filling the buccal opening, the gular pedestal very short and broad, with the aperture at its extremities very small; body large to very large in size; legs nearly as in Asidopsis. 20—Body elongate, moderately large to small in size, moderately convex to nearly flat above, with or without erect sparse hairs, the elytra not costate as a rule; anterior tibiæ generally slightly serrulate externally, with the outer angle at tip variable but usually distinctly
 - *For the sake of consistency in forming the plural of Greek words such as elytron, meron, sternum and others, it seems best to abandon my heretofore uniform custom of using pleura, with the plural pleuræ, although the apparent preference of this form by the Greeks themselves was the probable cause of its proposal by Audouin in early days. The example of Audouin was generally followed until recently, there now being an evident tendency to employ the form pleuron with plural pleura.

everted and acutely spiniform; tarsi clothed beneath with short stiff inclined hairs; mentum transverse, in loose contact with the 21—Body oblong-oval, moderately convex to subdepressed above, generally covered with a closely adherent earthy incrustation and with short recumbent hairs, sometimes clustered more densely on the elevations, the elytra with distinct reflexed humeri and acute side margins, the surface with interrupted, very sinuous and irregular raised lines or spots, which generally differ sexually, the base of the prothorax having a feebly impressed rounded median lobe and a rather deep sinus at each side; mentum entirely filling the buccal opening, without evident pedestal; antennæ slender, with the tenth joint abruptly wider; anterior tibiæ everted and acute at tip, slightly serrulate externally; tarsi rather short but slender, with short and coarse inclined hairs beneath; prosternum more or less porrect and deplanate between the coxæ. [Type A. grisea Fabr.]. *Asida

Body more elongate and subparallel, moderately convex, the prothorax and oral organs nearly as in *Asida*. the elytra with a single even discal costa on each and acute side-margins, the integuments clean and not incrusted, the sinuous irregular elevations wanting; anterior tibiæ strongly everted and acute externally at apex; tarsi unusually elongate, with small stiff setæ beneath; antennæ differing wholly from those of the two preceding, stouter, feebly and very evenly increasing in width to the apex of the tenth joint. [Type *A. gaditana* Escal.].*Alphasida

Besides these generic groups several others have been proposed, which it is not possible to include in the table because of the lack of special data concerning them. As to *Stenomorpha* Sol., its type, costata, which is not a Euschides, does not prevent the latter genus from being maintained, although LeConte gave the name as a substitute for Stenomorpha, on the ground that the latter name was preoccupied by Stenomorphus. In this I cannot agree, and believe that it should not be held to be preoccupied. Still less should Stenosides Sol., be considered unavailable, either because of its impropriety or its resemblance to Stenosis, as suggested by Lacordaire; but, for much the same reason as in the case of Euschides and Stenomorpha, the genus named Ologlyptus by Lacordaire, which is

however antedated by *Pactostoma* Lec., can be legitimately sustained, since *anastomosis* Say, which was included, although not fitting the generic diagnosis of Lacordaire so well as *graciliformis*, is evidently generically different from the type named *Stenosides graciliformis* by Solier.

The genus *Philolithus*, of Lacordaire, is said to differ from *Pelecyphorus* solely in the absence of a definite everted acute angle at the apex of the anterior tibiæ. This is only measurably true of *carinatus*, the type of *Philolithus*, and in others that must necessarily be included, such as the *ægrotus* and *actuosus* groups, there is evidently an everted and acute angle; so I can perceive no other just course to pursue than to consider *carinatus* congeneric with *mexicanus*, the obviously intended type of the mixture named *Pelecyphorus* by Solier, through such forms as *ægrotus* and *morbillosus*.

Mr. Geo. C. Champion founded a number of new genera among the Mexican species under the names Sicharbas, Zaleucus (= Zamolxis preocc.), Poliorcetes, Ucalegon and Tisamenes, the first of which is related to Astrotus and doubtless a very good genus. The others were suppressed by their author in an appendix to the volume of the "Biologia" in which they appeared, but I have scarcely any doubt that some of them are valid and will ultimately have to be resuscitated; they are probably more or less close allies of Pelecyphorus. In addition to these genera it is almost certain that at least fifteen others will prove necessary for known aberrant Mexican types and in making allowance for some American species, such as Microschatia sulcipennis and morata and Asida subvittata, luctata. semilævis and flaccida, which will almost undoubtedly necessitate separate genera, as well as for others not yet discovered. As none of the Mexican species belong truly to Asida, it would be well, in cataloguing them, to assign provisionally such as are not disposed of generically in the present paper to some of the genera here defined, with which they may apparently be most closely affiliated.

The three European genera at the end of the table are introduced in order to indicate the connection of the old world fauna with the new. There is actually no resemblance whatever between the two faunas in this tribe, and of the eighty or more European and North African species in my cabinet, I cannot recognize one that bears the faintest resemblance to any American form, showing that species of this tribe, in common with the Tenebrionidæ generally, have independently developed in the new and old world from a few contemporaneous archetypes, during the time which has elapsed since the continental masses were permanently separated. This, among other reasons, tends to prove the Tenebrionidæ to be a comparatively modern type of Coleoptera (see p. 72, footnote).

The European and African species are seemingly as numerous as those of North America, or perhaps even more so, but they form a still more difficult problem for the taxonomist, especially in the differentiation and limitation of the genera, of which there are beyond doubt a considerable number. It is only within a few years that they have been at all discriminatively studied. The genera or subgenera Globasida and Alphasida, very recently characterized by M. M. de la Escalera, are diagnosed in the above table from deformis Escal., and holosericea Germ., respectively, as I do not possess their typical species; but the assumed types are probably congeneric in each instance. One of these groups at least, Globasida, is associated in the latest European catalogue with many specific types which do not seem to conform to its generic characters. and there are other evidences of lack of careful consideration in that list of species. For example, the Sardinian species named genei, by Solier, is evidently distinct from the Corsican corsica, but it appears in this catalogue as a complete synonym of the latter, without even the solace of a varietal designation. Again the numerous specific and subspecific forms clustering around certain prominent types, bear evidence of being as completely overlooked as those of our own fauna. In the case of corsica, I have four or five distinct forms, some with minute granules on the elytral depressions and one without trace of granulation but, instead, with fine simple close-set punctures, and they differ among themselves in many other ways besides; in genei the punctures are coarse and conspicuously different. So also in the cases of planipennis, dissimilis, goudoti and depressa, there are many distinctly characterized related forms which have been almost wholly neglected; those in the neighborhood of sabulosa are so numerous and closely allied, that, in view of their diversified sexual differences, we encounter difficulties that will probably never be completely unraveled.

As a section of the tribe Asidini the Eurafrican species differ from the American (1) in the marked differences between the sexes, which, in depressa, become extreme, there being few Coleoptera in which the sexes become so completely incongruous, (2) in the more narrowly separated coxæ, (3) in the prominence of the intercoxal process of the prosternum, which, though occasionally disappearing as in reichei, is nevertheless generally at least traceable, and as characteristic of the old world species as the deflexion of the process is of the American, (4) in the more slender antennæ with the tenth joint more abruptly enlarged, a character which is however subject to some exceptions in both regions, (5) in the almost universally less developed gular pedestal of the mentum, and (6) in peculiarities of sculpture as developed in the more typical species, the tufted tubercles being unknown among the American representatives, although suggested perhaps in the very aberrant Mexican fasciculata Champ. The tendency to become coated with indurated and closely adherent mud is also much more characteristic of the European than of the American species, there being however some exceptions among our genera and many notable exceptions in the Mediterranean fauna, such as depressa, dissimilis, goudoti, politicollis, sicula and other related forms, among which there are assuredly several genera distinct from A sida.

Astrotus Lec.

The few known species of this genus have the surface throughout coated densely with indurated earthy matter, which becomes virtually an almost integral part of the integuments and is very difficult to remove; through this coating the minute setæ protrude. The fact that these hairs are not involved in the coating, but are maintained clean and free from such extraneous substance, proves them to possess a tactile function of direct utility as a means of recognizing external impact; they are therefore subject to the laws of natural selection and the diverse forms that they assume in the various genera are of greater value in a taxonomic sense than is usually admitted. This is a general law affecting setæ growing from punctures throughout the Coleoptera, but does not concern so evidently the fine dense pile sometimes present, as on the under surface of the Melolonthinæ for example.

T. L. Casey, Mem, Col. III, Feb. 1912.

The body in Astrotus is moderate or rather small in size, roughly and unevenly sculptured and apparently glabrous under low powers of enlargement. The antennæ are shorter and more moniliform than usual, with the third joint shorter than in any other of our genera, being about twice as long as the second but not longer than the first, the tenth joint spongiose only on the parts left exposed by the small subimbedded eleventh joint. The labrum is moderately transverse and sensibly sinuate. The mentum differs from that of any other American genus, except possibly Stenosides and Sicharbas, in completely and closely filling the entire buccal opening. being contiguous also to the closed mandibles and is without trace of gular pedestal, nearly as in the European Asida; the palpi are moderate or rather small, with the last joint never scalene. tarsi are short but slender and there is no exposed trochantin. anterior parts are not so small in relation to the hind body as in Pactostoma (= Ologlyptus Lac.), the elytra unevenly convex, deeply embracing the body beneath and with the humeral angle distinct though varying in form specifically.

The three species may be known as follows:

Antennæ broadened apically through the ninth and tenth joints. Body rather narrow, only moderately convex; head transversely impressed between the antennal prominences, also with a small median impression on the occiput, the epistoma sinuato-truncate; antennæ a little longer than the width of the head; prothorax about a fourth wider than long, the sides strongly prominent and narrowly rounded at the middle, thence converging and feebly sinuate anteriorly and equally converging and deeply sinuate basally, the base evenly sinuato-truncate throughout, the angles right, slightly blunt, the apex deeply sinuate with the angles bluntly rounded; surface densely, subgranularly sculptured, broadly, feebly concave laterally, tumid medially, with the median line impressed anteriorly, exterior to which there are two small impressions on each slope of the tumidity, also a larger rounded impression before the scutellum, the latter small; elytra three-fifths longer than wide, gradually widening to apical third, the side margins with tubercles and crests, one of which forms the humerus, which is exposed beyond the thoracic base; surface granulate, the suture flat, feebly elevated, each elytron with an uneven medial ridge, connected by anastomosing ridges with the suture and curving at apical fourth to meet a sutural ramus in a stronger elevation, the ridge continued thence to the apex and having an acute tubercle midway; legs rather short, the very short pale stout hairs abundant and conspicuous; anterior tibiæ with an everted and very acute spiniform external angle at apex. Length 11.8-13.7 mm.; width 5.5-6.5 mm. Texas.....contortus Lec.

2—Body stout, more oval and more convex, densely coated, the fine ridges and elevations with small, close-set tubercles appearing through the coating like strings of small beads; head more feebly impressed, the occipital impression nearly obsolete, the epistoma more broadly and clearly sinuate, the antennæ not longer than the width of the head; prothorax more transverse, more than one-half wider than long, widest slightly behind the middle, where the sides are less prominent and more broadly rounded, strongly converging and not sinuate thence to the deeply but narrowly sinuate apex, feebly converging but deeply sinuate to the transverse base, which is flexed a little posteriorly laterally, the angles thus acute and sensibly prominent, the apical narrowly rounded; surface broadly, feebly concave laterally, tumid medially, the median line narrowly, subevenly impressed except near base and apex; elytra broader, more oblong, widest slightly behind the middle, the side-margins distinct but not carinate or tuberculose, rapidly rounding posteriorly, becoming almost transverse to a slightly more elevated junction with an oblique rumus from the suture, the median ridge feeble, irregular, much disintegrated anteriorly, flexed inward posteriorly to a tubercle at the middle of the ramus; suture not elevated and with numerous anteriorly oblique and very feeble branches; humeral angles exposed but obtuse; legs short, rather slender, evidently micro-setulose; tibiæ nearly as in contortus. Length 14.7 mm.; width 7.5 mm. Texas. regularis Horn

Body smaller, the elytra shorter and relatively more inflated, black, the coating dense, the surface anteriorly densely granulose, but, on exposed spots of the elytra, smooth with small sparse punctures and granules; head nearly as in contortus but with the impressions feeble, the antennæ barely at all longer than the width of the head; prothorax as in contortus, except that the median line is more narrowly and evenly impressed almost throughout the length and the rectilinearly truncate base is flexed abruptly posteriorly at the sides, causing the hind angles to be posteriorly prominent and more acute; elytra two-fifths longer than wide, the sides more parallel and more arcuate than in contortus, more nearly as in regularis, widest near the middle, the side margin irregular and uneven but not tuberculose, the subapical formation somewhat as in regularis but with the entire surface coarsely reticulate or clathrate, the dividing ridges of the cells acutely elevated, thin and rough, the medial ridge well defined but not more elevated than the transverse ridges, the suture feebly elevated, more narrowly than in contortus; humeri exposed, obtusely angulate and feebly reflexed; legs and tibiæ nearly as in the other species, short, rather slender, the parts cylindric; prosternal process much more deflexed posteriorly than in either of the others, not prominent, the sloping posterior part impressed. Length 11.5 mm.; width 5.8 mm. Texas.

In contortus the base and apex of the prothorax are equal in width; in regularis the base is much wider, and in alveolatus correspondingly narrower, than the apex. Contortus and alveolatus have the same form of prothorax, this being very different in regularis; but, in alveolatus, the hind body is more nearly as in regularis; in the former the prosternal process differs markedly from the porrect flattened form of either contortus or regularis, though, at the same time, it is not declivous behind as in Pactostoma but gradually becomes vertical on its posterior face.

Stenosides Sol.

Not having the type of this genus, the Mexican graciliformis, before me at present, I am unable to make any original observation concerning it. The diagnosis of Solier omits some characters that would prove useful in estimating its degree of relationship with Astrotus, but some remarks of Lacordaire under his description of Ologlyptus, which was apparently drawn mainly from graciliformis, would seem to show that it is really more closely related to Astrotus than to the species which I have assumed as the type of Ologlyptus Lac., Asida anastomosis of Say, although the prosternum between the coxæ, according to Lacordaire, more closely resembles that of anastomosis. On the other hand, perhaps a too hasty examination of graciliformis indicated a form of the process similar to that described above under Astrotus alveolatus, which at first sight might easily be pronounced identical with that characterizing anastomosis and allied forms; but a closer examination shows that it is really different in having its posterior wall truly vertical toward the lower margin and not posteriorly sloping, being simply a modification of the porrect prominent form typical of Astrotus. It is sufficiently evident, at any rate, that Lacordaire united two genera in his conception of Ologlyptus and that Stenosides should be considered a valid generic group.

I am inclined to place the following species in the genus Stenosides:

Blackish, covered with yellowish scales, rather elongate, somewhat flattened above; head covered with yellowish scales, which completely conceal the sculpture; antennæ much heavier than in *Ologlyptus anastomosis;* prothorax transverse, broadest at about the middle, the surface convex, bifoveate, with a fine distinct median

carina which is bifurcate at base, the lateral margin thickened, explanate, rather widely reflexed; apex deeply emarginate, the base slightly bisinuate, the sides very strongly rounded, more suddenly so posteriorly, with a strong constriction in front of the hind angles, which are distinctly acute and rather prominent, the apical acute, feebly rounded; elytra about as wide as the broadest part of the prothorax, almost parallel to about a third from the tip, thence suddenly sinuately narrowed, the apices conjointly rounded; suture elevated posteriorly; costæ three in number, the first nearly straight, parallel to the suture, reaching the base but abbreviated at apex, the second parallel to the first, slightly shorter at each end, the third forming an overhanging elytral margin to just beyond the tip of the second, where it curves in and becomes discal though fading out before attaining the elytral apex, the costæ not confluent at any point; body beneath with large scale-bearing punctures, distant on the abdomen but closer on the thoracic segments; legs densely scaly and relatively stouter than in Ologlyptus anastomosis. Length 9.0 mm. Texas (Cameron Co.).....texanus Wick.

This description is drawn directly from that of Prof. Wickham (Can. Ent., 1903, p. 72). The apex of the prosternum is said to be deflexed, in the author's opinion excluding it from *Astrotus*. It is probable that the *Astrotus limosus* of Champion, is also a species of *Stenosides*.

Pactostoma Lec.

The body in this genus, which was published in 1858 and therefore antedates *Ologlyptus* (1859), is of small size, elongate, rather convex form, with the anterior parts smaller or the elvtra relatively more inflated than usual: the hind body is however never notably stout. The integuments and antennæ are finely chagrined in texture, dull and punctured, each puncture bearing a stout recurved and very distinct pale hair. The mentum closely fills the buccal opening, extending almost but not quite to the closed mandibles and rests upon a broad and very short gular pedestal. Antennæ rather slender, with more elongate joints than in Astrotus and with the usual tribal structure of the apical parts, the epistoma broadly sinuato-truncate, the labrum feebly sinuate medially, only moderately transverse and the eyes coarsely faceted. The elytra are more shining and are evenly oblong-oval as a rule, sometimes slightly broader behind the middle, with the base equal in width to the thoracic base or but little wider, sometimes with a fine constriction just behind the humeral angles, which are distinct and narrowly though feebly reflexed. The acute margin is gradually

flexed inwardly toward apex, meeting the first costa near the apex and thence extending as a single costa nearly to the conjointly subacute tip; between the first costa and the side margin there is a very irregular second costa having numerous branches and uniting with the first costa behind the middle. The costæ are more densely punctured and pubescent than the depressions but the pubescence is of the same character. The legs and tarsi are short and slender, the anterior tibiæ cylindrical, generally with a very small acute external angle at tip. The prosternal process is deflexed, sloping gradually to the level of the mesosternum and the trochantin is small but visible. The integuments are usually clean, only occasionally being covered with a dense argillaceous coating, this being by no means characteristic as it is in *Astrotus*.

The various species and subspecies adhere very consistently to the above formula and are closely allied among themselves; those in my cabinet may be recognized possibly by the following characters:

3—Body moderately stout, blackish-brown in color, the yellowish hairs conspicuous, dense on the ridges; head not evidently impressed, the hairs very coarse and conspicuous; antennæ nearly as long as the prothorax, joints three to six gradually and slightly shorter, the tenth abruptly wider, the eleventh small, transversely rounded; prothorax slightly wider than long, the apex moderately sinuate, distinctly narrower than the base, widest slightly behind the middle, the sides broadly rounded, converging and feebly arcuate to the acute but not prominent apical angles, converging, becoming sinuate and then parallel to the right and not rounded but not at all prominent basal angles, the base transverse and rectilinear throughout; surface broadly, evenly convex, becoming explanate along the sides. strongly, not densely punctate, with a smooth median line and a small punctureless spot at each side of the middle; scutellum broadly triangular; elytra widest at the middle, where they are much wider than the prothorax, at base as wide as the base of the latter, threefifths longer than wide, the first costa frequently divided partially, the space between the second costa and the sides with a short posterior intermediate ridge as usual and with numerous other inequalities; depressions strongly but not coarsely or conspicuously and rather

sparsely punctate, the side margins minutely granulose; abdomen convex, paler in color, strongly but sparsely punctate. Length 12.0 mm.; width 5.7 mm. Kansas. [Asida anastomosis Say].

anastomosis Say

A—Nearly similar but shorter and with the hind body relatively a little more inflated, the first costa feebler and frequently in great part almost obsolete, the elongate cell, formed between the second costa and the short costa near the posterior part of the surface between the second costa and side margin, very much less oblique in direction than in *anastomosis*, the sides more rapidly rounding inwardly behind and the humeral angles more exposed and slightly prominent; prothorax nearly similar but widest at the middle and with the apical as well as the basal angles more acute and slightly more prominent; antennæ slightly more slender. Length 11.4–11.6 mm.; width 5.75–5.8 mm. Texas (El Paso),—Dunn.

salebrosa n. subsp.

Body smaller, relatively shorter, rather convex, black, the pale hairs longer but less numerous; head sparsely punctured, the long hairs becoming short anteriorly; antennæ rather stouter than in anastomosis; palpi moderate, the last joint recti-triangular and but little longer than wide as usual; prothorax a third wider than long, formed nearly as in salebrosa but with the side margins more thickened, the punctures sparser and more irregular and with the impunctate areas larger and irregular, the median line broader toward base; elytra nearly as in salebrosa but barely one-half longer than wide and with the humeri not prominent, the base equal in width to the thoracic base, the ridges similar but more elevated, the shining depressions more coarsely punctured, especially toward the suture, and with the sparse granules more evident; side margins more evidently thickened and granulose. Length 10.0 mm.; width 4.7 mm. Mexico (Chihuahua—near the city),—H. F. Wickham.

*breviuscula n. sp. 4-Form rather slender, stouter in the female, very dark brown or piceous in color, the hairs unusually short and coarse, strongly recurved and subdecumbent; head feebly impressed, finely, sparsely punctate, more strongly and closely on the occiput, the antennæ moderate: prothorax decidedly shorter than in anastomosis, twofifths wider than long, widest at the middle, the apical sinus shallower and the transverse base becoming posteriorly oblique near the angles, which are right to slightly acute; sides subevenly and rather broadly rounded, less sinuate basally than in anastomosis, the margins more thickened; surface strongly, rather sparsely and unevenly punctate, the median line not so well defined, moderately subreflexed laterally; elytra oval, widest slightly behind the middle, otherwise nearly as in anastomosis but more coarsely punctate and with the ridges more pronounced and not so densely punctate or Length (♂, ♀) 11.4-13.0 mm.; width 5.3-5.9 mm. Arizona (Globe).....exoleta n. sp.

Form still more slender than either of the preceding and with the apical

Form more ventricose than in the three preceding, the prothorax smaller; integuments deep black, the elytra very shining but having the body densely coated throughout with earthy matter in a manner differing from any of the preceding species, which are usually wholly free from such coating; pale hairs small and decidedly sparse, not much closer on the ridges; head sparsely, rather finely punctate, the antennæ more slender; prothorax scarcely a fourth wider than long. widest slightly behind the middle, the apex deeply and parabolically sinuate and distinctly narrower than the base, the latter feebly arcuato-truncate, slightly oblique at each side, the angles right, not rounded; sides arcuate, feebly sinuate basally; surface sparsely, unevenly punctate, broadly and feebly concave laterally, the edge thickened; elytra barely one-half longer than wide, parallel, oval, widest at the middle, the apex rather prolonged and acute; ridges of the same general form as in the other species but with the first and second confluent only slightly behind the middle, the concavities sparsely but strongly punctured; legs very slender, short as usual. Length (♀) 10.8 mm.; width 5.3 mm. New Mexico.

luteotecta n. sp.

5—Body slender, gradually broadening to well behind the middle of the elytra (♂), or with the latter broader, more evenly oblong-oval and widest at the middle (♀), the integuments blackish-brown, not coated with earthy matter as a rule, the pale hairs unusually long and relatively slender, though notably sparse, a little closer on the narrow summits of the ridges; head as usual; prothorax but little wider than long, rather more evidently so in the female, widest at the middle, where the sides are more or less subprominently rounded, thence converging and nearly straight to both apex and base, the former deeply, parabolically sinuate, the base broadly arcuatotruncate, with a feeble sinus at each side, the angles slightly obtuse but not at all rounded; surface dull as usual, strongly, sparsely punctate, with a broad and very well defined impunctate median line, and, at each side, about two irregular punctureless spaces, moderately concave laterally, the edge scarcely thickened, having

just before the scutellum a short transverse fold; elvtra with sculpture nearly as in anastomosis, except that the ridges are much higher and with finer summits, the more concave interspaces strongly, irregularly punctured, shining, the humeri slightly everted and prominent but not exposed basally; abdomen rather strongly and closely but not very coarsely punctate (σ^1) , or finely, sparsely so (♀). Length 10.0-12.2 mm.; width 4.1-5.8 mm. Arizona (Winslow),—H. F. Wickham.....sigillata n. sp. Body small and rather slender (♂), strongly convex, deep black, densely coated with earthy matter, the pale hairs nearly as in the preceding but not quite so long; head feebly impressed and punctulate, dull, the antennæ moderately slender, the third joint notably longer than the fourth; prothorax but little wider than long, widest rather behind the middle, where the sides are somewhat prominently, almost subangularly rounded, thence converging to base and apex, becoming very feebly sinuate near each, the apex only moderately sinuate, with the angles not much advanced and somewhat blunt; base feebly arcuato-truncate, becoming slightly but broadly sinuate at each side; surface nearly as in sigillata, the fold before the scutellum finer; elytra sculptured as in sigillata, the first and second ridges confluent near apical third but differing in outline, being more regularly oval, widest nearer the middle and more acute posteriorly; punctures between the suture and first ridge very coarse and deep; abdomen rather strongly but only moderately closely punctate; external apical spine of the anterior tibiæ exceptionally small and slender. Length 9.7 mm.; width 4.25 mm. New Mexico.

obtecta n. sp.

The male and female differ considerably in this genus, the former being notably more slender and with the greatest width of the body more posterior than in the latter, at least in several species. The punctuation of the abdomen is usually much stronger and closer medially in the male than in the female, where the punctures are not only finer but sparser and more evenly distributed; this is particularly evident in *exoleta*, where the abdominal punctures are conspicuously strong and close-set medially in the male. The sculpture of the upper surface is apt to be more pronounced in the male, and there are slight differences, as usual, in the relative sizes and proportions of the anterior parts and the hind body. The singular short transverse fold of the pronotal surface, situated along the base just before the scutellum, is a generic character but is poorly defined except in *sigillata* and *obtecta*.

Pycnonotida n. gen.

In this genus the body is stout and very convex, without closely adherent earthy matter, the pronotum gibbose, with a discally impressed basal lobe, strongly, densely, muricately sculptured as a rule and subequal in width to the elytra, sometimes broader and occasionally narrower, especially in the female, the elytra sinuate at base, very roughly and unevenly sculptured and with minute granuliferous punctures scattered irregularly over the surface, becoming a little more pronounced near the side margins, which are acute, gradually rounding inward behind and extending to the apical angles; the inflexed sides, or epipleura, are very narrow for the present tribe. The head is moderate, the epistoma somewhat subangularly sinuate and the labrum feebly sinuate medially. The mentum is transverse, contiguous to the sides of the buccal cavity, resting upon a very short and broad gular pedestal, the open cavities at the sides of which are very small; the apex is distant from the closed mandibles, as in all normal Asidids, and has the usual small medial sinus, the ligula small, angularly emarginate, nearly flat and retractile, the palpi moderate. The antennæ are rather long, stout, compressed and subparallel, clothed throughout with very stiff black setæ, only very feebly enlarged apically, the ninth joint longer than the transverse tenth joint and often fully as wide, the tenth deeply, subobliquely sinuate at apex, with the ends of the exposed apex spongiose, the eleventh very small, short, obliquely truncate in contrary sense to the obliquity of the tenth, and, as usual, spongiose at tip; the third joint is notably longer than the basal joint, conforming to the general rule in the tribe. The prosternum is porrect between the coxæ and the convex abdomen is always coarsely punctate in typical forms of the genus; the trochantin is large and distinct. The legs are rather long and well developed, the tarsi stout, the intermediate three joints of the anterior very short and transverse; they are briefly setose throughout; anterior tibiæ moderately everted and acute at apex externally. The tarsal claws are pale testaceous, in marked contrast to the black and dullish integuments of the body and legs.

In *Microschatia*, as represented by the typical *punctata* of Solier, the tenth antennal joint is notably wider than the ninth, the body is flatter and has a very different type of dorsal sculpture, as seen particularly in the rows of coarse punctures on the elytra. In *Pycnonotida* the eyes are very much shorter, very thin or transverse and are notably less coarsely faceted than in *Pactostoma*. There is

in fact no close affinity of any kind between the *Microschatia* group, containing *Pycnonotida*, *Microschatia* and one or two other genera as yet undescribed, and *Pactostoma*, but this scarcely seems to warrant the course suggested by Dr. Horn in making *Astrotus* and *Pactostoma* a group apart, for *Pactostoma* is a form in some respects transitional between *Astrotus* and the more normal Asidids, in having the mentum slightly separated from the closed mandibles and resting upon a rudimentary, though evident, gular pedestal, of which there is no trace in *Astrotus*.

The species and subspecies in the neighborhood of *inæqualis* are numerous but difficult to separate on expressible characters, though clearly distinct under actual comparison; they have been overlooked thus far and disregarded as accidental variations of *inæqualis*; those known to me have the following differential characters:

Upper surface wholly or in great part rugose
Upper surface smooth or nearly so, the pronotum not muricate8
2—Pronotum densely and strongly muricate
Dronotum regislately and strongly intilicate.
Pronotum variolately punctate
3—Sides of the prothorax very rapidly converging anteriorly, the apex
seldom more than one-half the maximum width4
Sides of the prothorax but little more converging anteriorly than pos-
teriorly, the apex two-thirds the maximum width
4—Abdomen less coarsely and more closely punctate, with the interspaces
not more or less shining but densely opaque and minutely sculp-
tured; prothorax distinctly wider than the elytra in the male. Body
moderate in size, the minute hairs blackish; head coarsely punctate,
very densely so toward base; antennæ as long as the prothorax, the
latter one-half wider than long, the sides strongly rounded, the apex
barely one-half the maximum width, evenly convex, feebly concavo-
explanate laterally, finely, strongly and very densely muricato-
punctate throughout, the basal impression deep, with an oval flat
space at its bottom on the hind margin punctureless; hind angles
very obtuse but scarcely at all blunt; apex sinuate, the angles slightly
blunt; elytra scarcely more than two-fifths longer than wide and
one-half longer than the prothorax, oval, the sculpture of each
resolvable into two coarse discal ridges, having their slopes deeply.
subtransversely gullied and the line of their crests finely sinuous;
fine granules strong except near the suture; legs closely, muricately
punctate; abdomen (8) not impressed basally. Length (8) 12.5-
13.0 mm.; width of prothorax 6.7 mm., of elytra 6.2 mm. Southern
California (locality not recorded)laxicollis n. sp.
Abdomen coarsely and rather sparsely punctate, with the interspaces
rather shining, the prothorax not obviously wider than the elytra
in either sex5

5—Abdomen not impressed basally in the male. Body larger and notably stouter, very convex, opaque, the pronotum with black hairs; head very coarsely punctate, closely toward base; prothorax in form nearly as in *laxicollis* but with the aciculate murication finer and less dense, the sides more explanate; elytra (\$\phi\$) at least a fifth wider than the prothorax and almost twice as long, evenly oval, widest at the middle as usual, the rugose sculpture more unevenly disintegrated, resolvable into three or four relatively finer and closer uneven ridges, the granules smaller. Length (\$\phi\$) 14.0 mm.; width 7.7 mm. Southern California (vicinity of San Diego). [Microschatia inæqualis Lec.].

inæqualis Lec.

Abdomen with a strong and broadly concave medial impression toward base in the male. Body moderately stout, black, opaque, the elytra slightly shining on the elevated parts; head very coarsely, loosely but subevenly punctate, not more densely so basally; antennæ as usual; prothorax rather more than one-half wider than long, nearly as in inæqualis but much more coarsely muricate, more impressed on the median line centrally, more strongly explanate and concave laterally and with a more broadly concave basal impression, the apex slightly more than half the maximum width; elytra equal in width to the prothorax and two-thirds longer, oval, the two ridges lower than usual, very much broken, the sutural line smoother and somewhat concave, the apical slope also smoother than in the preceding species; granules very conspicuous laterally; abdomen coarsely, moderately closely punctate throughout. Length (σ) Southern California,-Mr. Sanford. 13.0 mm.; width 6.4 mm.

araneoides n. sp.

6—Body narrower, more oblong-oval, or less constricted at the waist, opaque; head coarsely, loosely punctate, more coarsely but scarcely more closely basally; prothorax shorter, more parallel and with less inflated sides than in any other form, of the usual convexity but more narrowly declivo-subexplanate at the sides, the surface not impressed medially, coarsely, densely and sharply muricato-punctate, the basal impression as usual; elytra as wide as the prothorax and about twice as long, nearly as in the preceding but with the granules laterally smaller and sparser; abdomen very strongly, rather closely, muricately punctate, the interspaces rather shining

but closely, minutely punctulate, without trace of basal impression in the male. Length (3) 12.0 mm.; width 6.0 mm. Southern California (locality not recorded)......impar n. sp.

7—Body black, slightly shining; prothorax with the sides strongly rounded and subreflexed, densely, variolately punctate, less retuse medially at base than in *inæqualis*; elytra uneven in sculpture, smooth toward the suture and apex. Length 15.7 mm. Southern California (Warner's Ranch). [Microschatia puncticollis Lec.].

puncticollis Lec.

The last species of the table is included with some doubt, as it manifestly differs very much from the *inæqualis* type and belongs to a somewhat different faunal region. However, it evidently fits the present genus better than *Microschatia* and may be safely left here until its generic characters can be observed more fully. The form made known, in very few words by LeConte under the name *Microschatia puncticollis*, would appear to be specifically distinct from *inæqualis* and its immediate allies, in having the pronotum punctured rather than muricate; this feature was evidently overlooked in reducing it to synonymy.

Microschatia Sol.

While resembling *Pycnonotida* in many of its more important characters, such as the thick antennæ with obliquely emarginate tenth joint, stout tarsi with the intermediate joints of the anterior very short and subperfoliate, median impression at the base of the pronotum, reproduced however in *Euschides* and some other genera, and narrow inflexed sides of the elytra—although in the typical species the epipleura are not defined—it would seem that *punctata* and *championi* must form a separate genus, because of the different form of the body, radically different sculpture in having the elytra

coarsely and serially punctate, more deeply sinuate labrum and the mentum extending laterally even beyond the sides of the buccal cavity anteriorly. The basal angles of the prothorax are distinct but do not overlap the humeri in the typical forms of *Microschatia*. The species are all unknown to me in nature, and the following descriptions are taken from the outline sketches made known by Dr. G. H. Horn (Trans. Am. Ent. Soc., 1893, p. 140):

Form oblong-elongate, the sides of the prothorax regularly arcuate, without sinuation, the hind angles distinct but not prominent, the surface coarsely, sparsely and irregularly punctate and with a depression at the middle of the base; elytra with coarse punctures arranged in irregular rows, the intervals elevated, forming a reticulation, sometimes exhibiting a tendency to become subcostate, in which cases the general sculpture approaches that of *Glyptasida sordida*; prosternum coarsely, cribrately punctured at the sides, broad between the coxæ, the apex broadly truncate; met-episterna scarcely longer than wide; epipleura not distinctly limited. Length 15.0 mm. Mexico (State of Hidalgo).....*punctata Sol.

Body oval, narrower in front, opaque; head vaguely and not closely punctate, each puncture with an elongate pale scale; prothorax at base one-half wider than long, narrower at apex, the sides feebly arcuate, the hind angles prolonged slightly over the humeri; surface convex, without median basal impression, moderately closely punctate, each puncture with a scale; elytra widest behind the middle, each with three feebly defined short discal costæ united by anastomosing lines, the intervals not distinctly punctate; propleura opaque, sparsely granulate; prosternum coarsely, sparsely punctate and with semi-erect hairs, the apex oval or subtruncate; epipleura well defined; abdomen coarsely, not densely punctate. Length 12.0–17.0 mm. New Mexico (Grant Co.) and Arizona.....morata Horn

Body oblong, more parallel, somewhat as in Asidopsis opaca; prothorax as broad at base as at the middle, the surface smooth, the hind angles acute, overlapping the humeral angles of the elytra, which are distinct; elytra parallel anteriorly and rather distinctly wider than the prothorax, the sides rounding inwardly behind, the surface closely and somewhat irregularly sulcate; abdomen finely, evenly and not densely punctate; prosternum moderately wide between the coxæ, obtuse or truncate at tip, the propleura punctate; epipleura well defined; met-episterna a little longer than wide. Length 15.0 mm. Texas (Llano Estacado)......sulcipennis Lec.

The two species *morata* and *sulcipennis*, the latter still represented by the unique in the LeConte collection, are only provisionally attached, as they will certainly form one distinct genus and probably two, by reason, among others, of the radically different form of the basal thoracic angles. It is probable that the Mexican *robusta* Horn, is congeneric with *morata*.

Glyptasida n. gen.

This genus is obviously distinct from its neighbors in several structural features, as well as in facies, the latter being peculiar and unremindful of any other type of the tribe. It is allied to both Pycnonotida and Pelecyphorus, agreeing with them in the small and nearly flat retractile ligula, and, in addition, is similar to the latter in the large scalene last palpal joint of the male and in its broad inflexed sides of the elytra; it differs from Pycnonotida, Microschatia and others of that small group of genera in both of these characters. The body is oval or oblong-oval, of rather large size, the labrum moderately transverse and evidently sinuate medially at apex, the mentum rather large and unusually parallelogramic, with the sides nearly parallel, and the apex has a small deep median emargination; the pedestal is short but evident and the sides of the buccal cavity are unusually abbreviated. The antennæ are moderately thick, bristling with very stout erect short setæ and the tenth joint is rather abruptly wider than long, deeply sinuate at the middle of the apex, with the spongiose spots extending laterally and sometimes becoming rather approximate on the sides, the eleventh small, rapidly obconic and transversely truncate and spongiose at apex. The maxillary palpi often have the large scalene terminal joint of the male peculiarly modified by apical emargination or excavation, but whether this is in any way accidental or is normal it is difficult to say definitely with the relatively small material at hand, as, in at least one case, the two terminal joints of the same individual are different, and yet it is difficult to understand how the profound concavity of the apex, sometimes reducing the lateral outline of the joint to a slender arc, could have been brought about. The prothorax is transverse, always bisinuate at base, with more or less posteriorly prominent and acute basal angles, this thoracic conformation being the chief character distinguishing it from Pelecyphorus. The elytra are always margined at the sides, the acute margin terminating at some distance from the apex, and each has two acutely formed subeven discal ridges, frequently united posteriorly about opposite the end of the marginal ridge and with the concave intervals transversely and unevenly folded or crumpled; the humeral angles are obtuse and more or less rounded, but the sides of the basal margin are laterally prominent and acute, because of a constriction immediately posterior thereto. The prosternum between the coxæ is strongly deflexed posteriorly, with its surface impressed along the median line. The legs are rather slender, moderately long and comparatively weak, the tarsi somewhat short but not stout, briefly spinulo-setose beneath, the anterior tibiæ moderately everted externally at tip and acutely pointed.

The species are moderately numerous but very local, those represented in my collection being separable as follows:

breviated, black, rather shining, the anterior parts dull; head feebly impressed, the punctures fine and not dense, becoming coarser and close basally; prothorax short, a little less than twice as wide as long in both sexes, the apex moderately sinuate, evidently narrower than the base, with blunt angles, the sides broadly rounded, converging and becoming feebly sinuate toward the basal angles, which are right and not rounded, the base broadly arcuate. becoming sinuate laterally: surface coarsely, very deeply and confluently punctate, convex, becoming explanate though scarcely at all reflexed and transversely rugose laterally; elytra about three times as long as the prothorax, and, in the female, not quite twice as wide, but little longer than wide in the latter sex, having the usual costæ well developed, the rugose intervals with the fine micro-setiferous granules numerous and conspicuous; abdomen not very coarsely but strongly, closely and subasperately punctate (σ) or more finely and sparsely though strongly so (\mathcal{P}) , the small hairs blackish. Length 16.5-18.0 mm.; width 9.0-11.0 mm. Colorado,—F. G. Schaupp.....porcatula n. subsp.

Elytral pubescence as in the preceding, color almost perfectly black, the hind body much inflated, dull, the elytra feebly shining; head with the punctures less evidently closer though slightly coarser basally than in porcatula; prothorax smaller than in any other species, not quite twice as wide as long, the evenly sinuate apex much more notably narrower than the base, with the angles right and scarcely blunt, the sides broadly rounded rather behind the middle, strongly converging and almost straight thence to the apex, feebly so but distinctly sinuate to the basal angles, which are more prominent, subacute but blunt, the base truncate medially, obliquely sinuate thence to the angles; surface nearly as in porcatula but with a feeble impression along the basal truncature, and, at each sinus, a rather large area devoid of punctures; elytra (2) nearly as in porcatula but more evidently longer than wide and rather more than twice as wide as the prothorax, similarly evenly oval and widest at the middle but differing in the relatively stronger outer and feeble inner of the discal ridges, the sutural region more depressed, the intervals much less sharply undulato-rugose, with the fine granules almost similarly close-set and distinct; abdomen (♀) more strongly and closely punctate than in porcatula, with similar small fuscous hairs. Length 18.0 mm.; width 10.7 mm. Arizona (locality not stated), —H. F. Wickham.....parvicollis n. sp.

Elytral pubescence half as long as the length of the eye, very coarse, pale yellowish and conspicuous; color grayish-black; general form nearly as in *sordida* but more depressed; head feebly, indefinitely impressed, strongly but not densely punctate, the small pale hairs distinct; prothorax two-thirds to three-fourths wider than long, parallel and broadly arcuate at the sides, moderately sinuate at apex, the angles blunt; basal angles unusually feebly produced, acute; surface moderately convex, coarsely, not very densely and irregularly punctate, moderately broadly concavo-explanate at

T. L. Casey, Mem. Col. III, Feb. 1912.

7—Body stout, strongly convex, black to piceous in color, rather shining; head strongly and closely punctate throughout, each puncture with a very short dark fulvous hair; prothorax short, nearly twice as wide as long, two-thirds to three-fourths as wide as the elytra, unusually convex, with coarse confluent punctures leaving large shining and very irregular punctureless patches, especially near the sides posteriorly and along the basal margin, concave and evidently reflexed with thin and scarcely at all serrulate edge laterally, the punctures with their anterior margins acutely crenulate, each bearing a short subfulvous hair; sides rounded; basal angles acute, not everted; elytra from a third (\emptyset^1) , to a fourth (\mathcal{P}) , longer than wide, widest somewhat behind the middle, the costæ rather fine and not strongly elevated, uniting on the posterior slope as usual, the flat broad intervals confusedly and coarsely, subtransversely rugose and with the minute granuliferous punctures close-set and conspicuous, each bearing an extremely minute erect hair; abdomen rather shining, sparsely, moderately punctate, more closely medially, the hairs very inconspicuous, dark fulvous. Length 19.0-20.0 mm.; width 10.0-11.2 mm. Kansas,—F. H. Snow....turgescens n. sp.

A—Form and sculpture nearly similar but much more inflated, black or nearly so, the prothorax (\$\varphi\$) less transverse, three-fourths wider than long, fully two-thirds as wide as the elytra, similarly sculptured but with the side margins much more thickened and abruptly narrowly though feebly reflexed from a distinct line at a slight distance inside the edge, the converging sides basally feebly and very broadly sinuate, the basal angles much prolonged posteriorly and acute; elytra more inflated, widest at the middle, a third longer than wide, the slender ridges higher, the interspaces less flat, rugose, with the fine granuliferous punctures much sparser though distinct, each with a longer and fulvous though very small

hair; last ventral unmodified. Length 20.7 mm.; width 12.0 mm.

Kansas (Wallace),—W. Knaus......obesa n. subsp. B—Form more parallel, convex, nearly black, the hind body shining, the remainder alutaceous; prothorax (♂) four-fifths wider than long, in outline nearly as in obesa but with the hind angles less produced and not so acute, the surface nearly similarly sculptured but with an almost entire impunctate median line, in addition to the uneven punctureless areas, toward the sides broadly concave, the sides strongly reflexed, rather thin and scarcely at all serrulate; base feebly sinuate at the scutellum, broadly sinuate laterally; elytra nearly as in turgescens but more shining and with the small granules very much sparser and less conspicuous; abdomen rather finely but strongly, sparsely and asperulately punctate throughout, the last segment of the male as usual un-

modified; terminal joint of the right palpus (σ^{n}) very deeply and obliquely excavated, reducing the outline on the inner side to

Body (♀) much narrower than even the male of turgescens, and very elongate, nearly black, rather shining throughout, the head opaque, broadly impressed, with a rounded impression on the vertex in addition, strongly, rather closely punctate throughout, the hairs extremely short and inconspicuous; prothorax large, three-fourths wider than long, fully three-fourths as wide as the elytra, coarsely, very irregularly and confluently punctate, with a few small punctureless areas, of which two along the base have a series of very fine punctures along the edge, convex, becoming concave laterally, the edge thin, narrowly but rather strongly, not suddenly reflexed, the sides broadly rounded, becoming feebly sinuate toward the basal angles, which are somewhat obliquely prominent and notably acute; base broadly truncate medially, sinuate laterally; elytra not very much less than twice as long as wide, oval, widest at the middle, sculptured nearly as in turgescens but with the costae higher, the intervals somewhat more rugose and the minute granules very much sparser as in furtiva; abdomen (9) nearly as in that form, except the last segment, which is remarkably modified, the apical half being depressed below the level of the basal half—viewed ventrally,—the vertical wall bounding it anteriorly being transversely excavated on its upper edge at each side and its surface medially having two deep subparallel grooves, extending from the anterior wall to the apex: last joint of the maxillary palpi moderate and recti-triangular. Length 21.5 mm., width 10.0 mm. Kansas (Wallace).

procrustes n. sp.

Body (3) very slender and elongate-oval, convex, black, the anterior parts and elytral depressions opaque, the elytral elevations shining; head moderately punctate, rather finely and sparsely so anteriorly, the hairs longer than usual, distinct, blackish; prothorax two-thirds as wide as the elytra, three-fifths wider than long, widest behind the mid-

dle, where the feebly serrulate sides are rounded, thence unusually converging and straighter anteriorly, feebly converging and subsinuate basally, the apex much narrower than the base, the basal angles subacute, nearly right, the margin truncate medially; surface convex, gradually explanate laterally, the edge thin and very feebly reflexed, very coarsely, confluently punctate, more transversely rugose laterally, the interspaces with small, sparse and irregular punctures; elytra very elongate, widest at the middle, fully twothirds longer than wide, the costæ rather abruptly elevated, thin, the intervals slightly concave, dull, rather closely, granularly punctulate, the rugæ unusually thin, transverse and abruptly formed, well separated; abdomen closely, asperately punctate, more loosely toward the sides, the last segment unmodified; hairs fine, blackish; maxillary palpi unequally excavated at tip. Length 18.0 mm.; width 8.5 mm. One male without locality label but probably collected in western Kansas..... strigipennis n. sp.

A—Nearly as in the preceding but oblong-oval, the prothorax very large, less transverse, three-fifths wider than long, very nearly as wide as the elytra, the sides broadly, strongly and subevenly rounded, the basal angles strongly produced posteriorly and acute; surface coarsely, confluently punctate, convex, becoming broadly concave and moderately reflexed laterally; elytra narrowed but little basally, only two-fifths longer than wide, shining, the intervals strongly undulato-rugose and with minute sparse granules throughout, each bearing a short but very distinct pale hair; costæ not confluent posteriorly, the first ending at the crest of the declivity, the second and marginal equal in length and prolonged to within a short distance of the apex, the ends of all the costæ perfectly abrupt and free, without indication of extension; abdomen strongly, asperately punctate, rather sparsely so laterally, each puncture bearing a very distinct subrecumbent pale fulvous hair. Length (3) 18.0 mm.; width 9.0 mm. Without indication of locality. fulvisetis n. subsp.

Form much narrower, convex, piceous-black, shining; head opaque, moderately and subevenly punctate, the dark hairs distinct; prothorax large, three-fifths wider than long, three-fourths as wide as the elytra, widest just behind the middle, where the sides are slightly prominent though broadly rounded, moderately and subequally converging thence to apex and base, feebly sinuate in the latter case, the angles moderately produced posteriorly and acute; surface

nearly as in *fulvisetis* but becoming still more concave and reflexed at the sides, the thin edge not serrulate, the small hairs less distinct; elytra fully one-half longer than wide, only moderately narrowed basally and widest somewhat before the middle; costæ very strong, the first and second only imperfectly confluent midway down the declivity, the intervals smooth but strongly undulato-rugose, the minute granules very sparse and inconspicuous, each with a minute, rather dark hair; abdomen with close asperate punctures and imbricato-rugose sculpture, sparser and less pronounced laterally, the fine hairs blackish and inconspicuous; last joint of the left palpus of the male type intact, large and strongly scalene, the right with a large apical excavation on the upper side near the apex. Length (3) 17.5 mm.; width 8.3 mm. New Mexico,—Gissler.

A—Piceous-black, shining; prothorax more than twice as wide as long, narrowed anteriorly, the sides rounded, depressed and transversely rugose, the disk rather densely punctate, the base broadly and slightly bisinuate, the hind angles subacute; elytra ovate, convex, strongly declivous behind, the suture, two discal costæ on each confluent before the apex and the lateral margin elevated; intervals very unequal, impunctate; beneath punctate. Length 20.2 mm. Texas (Llano Estacado). [Pelecyphorus irregularis Lec. and inæqualis Horn nec Lec. (Rev. Ten., p. 283)].

irregularis Lec.

B—Oblong, rather stout, moderately convex, black, slightly shining, the anterior parts duller and obscurely rufescent; head moderately punctate; prothorax very short and broad, fully four-fifths as wide as the elytra, very nearly twice as wide as long, the sides rather strongly and almost evenly rounded, the base broadly bisinuate, with the angles much produced posteriorly and very acute; surface coarsely, confluently punctate, narrowly concave, moderately reflexed and transversely rugose at the sides; elytra only about a third longer than wide, widest at the middle, very moderately narrowed basally, the sides rounded; surface with the costæ distinct, the discal confluent midway down the posterior declivity and thence feebly continued nearly to the apex, where the feeble ridge meets the marginal ridge; interspaces strongly, very confusedly, subtransversely rugose and without evident granules

but with a few widely scattered minute hairs; abdomen moderately, asperulately punctate. Length 17.5 mm.; width 9.7 mm. A single example of unknown sex labeled "Cal." in the Levette cabinet, but perhaps erroneously.....pigra n. subsp.

- C—Oblong-ovoidal, larger and stouter, black throughout, shining, the anterior parts alutaceous; head opaque, with rather scattered moderate punctures, each with a small brown hair; prothorax large, three-fifths wider than long, almost three-fourths as wide as the elytra, nearly parallel and with subevenly, moderately rounded sides, the basal angles only moderately produced posteriorly, less acute than in pigra, the surface nearly similar but much more broadly concave and more gradually, moderately reflexed laterally, the anterior angles similarly notably blunt and rounded; elytra two-fifths longer than wide, with rounded sides, widest at the middle, the costæ feebler than in pigra, similar posteriorly though more rapidly rounding inwardly at the sides, the intervals less concave, less coarsely, more transversely and less closely rugose, the surface with very minute sparse and inconspicuous granules, each bearing a very small dark fulyous hair: abdomen minutely punctulate and imbricato-rugulose. Length 20.0 mm.; width 10.8 mm. One example labeled like the type of pigra.....plena n. subsp.
- D-Oblong-oval, moderately convex, piceous-black, shining, the anterior parts alutaceous; head rather finely, loosely, punctate, the minute hairs indistinct; prothorax large, three-fourths as wide as the elytra, two-thirds wider than the median length, the sides subevenly and unusually strongly rounded from the rather acute apical to the produced and acute basal angles; surface only moderately coarsely, rather sparsely but unevenly punctate, becoming densely so laterally, the sides broadly concave, rather strongly, gradually reflexed and transversely rugose; elytra two-fifths longer than wide, widest at the middle, rather acute posteriorly, the sides arcuate, the discal costæ moderately elevated, their crests fine and acute, their posterior ends free, not at all anastomosing, the first extending more than half way down the convex declivity, terminating abruptly opposite the end of the marginal carina, the second ending abruptly near the upper limit of the declivity; intervals with strong rugæ, forming transverse spurs from the ridges, the surface smooth, minutely, remotely and inconspicuously granulate and with small but rather evident palish hairs. Length (3) 17.0 mm.; width 9.1 mm. The type without indication of locality but probably taken in Colorado. imperfecta n. subsp.

Elytral humeri very obtuse, broadly rounded and subobsolete, the elytra very strongly narrowed basally. Body suboblong, moderately stout, strongly convex, shining, the anterior parts dull black, otherwise subrufescent; head opaque, rather closely but not very coarsely punctate; prothorax very short and broad, four-fifths as wide as the elytra, very nearly twice as wide as long, the apex much narrower than the base, rather deeply, evenly sinuate as usual, with the angles

very bluntly rounded, the base broadly bisinuate, with the angles right, not at all rounded; sides subevenly and strongly rounded throughout the length; surface moderately coarsely, unusually deeply, densely and sublongitudinally confluento-punctate, with a few irregular punctureless areas, broadly concave, gradually and moderately reflexed and closely, coarsely, transversely rugose laterally; elytra ovoidal, fully two-fifths longer than wide, widest at the middle, with the sides very strongly arcuate; at the humeri much narrower than the thoracic base; discal costæ broad at base, the second finely acute along the crest and strongly elevated, the first very low and finely sinuous, uniting with the marginal ridge unusually near the apex, the second ending abruptly near the summit of the declivity; surface throughout very coarsely, strongly and confusedly rugose, impunctate and without evident hairs; under surface rufescent, alutaceous, the abdomen rather finely but strongly, not densely punctate. Length (\$\sigma^1\$) 16.7 mm.; width 8.7 mm. Texas.....heres n. sp.

10—Form elongate-suboval, strongly convex, black, somewhat shining throughout; head dull, rather finely, sparsely punctate, coarsely and more closely so at base, the hairs dark and indistinct; prothorax relatively very small, three-fifths wider than long, less than threefifths as wide as the elytra, coarsely, very deeply and unevenly but rather loosely punctate and strongly convex medially, the punctures densely confluent laterally, the sides subevenly rounded throughout, but little converging basally, more so apically and rather narrowly, deeply concave, reflexed and transversely coarsely rugose, the edge rather thick and strongly serrulate; hind angles small, not much produced, not blunt, the base sinuato-truncate medially, broadly sinuate laterally; elytra relatively large, much elongated, nearly three-fifths longer than wide and four times as long as the prothorax, widest at the middle, the sides broadly arcuate, the humeri obtusely rounded, not very evident, the discal costæ moderately elevated, equal, confluent at the basal margin and also more than midway down the posterior convex declivity, the surface moderately and not very closely, subtransversely rugose and with the granules distinct and rather close-set, the hairs not distinct; abdomen shining, the moderate asperulate punctures narrowly dense along the median line, sparse laterally, the last segment normal. (♀) 19.0 mm.; width 10.0 mm. Wyoming (Wind River).

crenicollis n. sp.

II—Body oblong, moderately stout, deep black and rather shining throughout; head broadly but evidently impressed, the punctures rather sparse but evident throughout, the minute hairs not very distinct; tenth antennal joint not very abruptly wider than the ninth; prothorax large, five-sixths or more as wide as the elytra, three-fifths wider than long, the deeply sinuate apex much narrower than the base, the angles blunt; sides evenly and rather strongly rounded, becoming straight or barely subsinuate near the basal angles, which are moderately produced and acute; surface convex, sparsely, unevenly and rather finely punctate, becoming broadly

concavo-explanate and more coarsely, closely punctate laterally, the edge narrowly rugose transversely, slightly thick and not at all serrulate; base truncate medially, broadly sinuate laterally; elytra fully one-half longer than wide, oval, with arcuate sides, widest slightly behind the middle, the humeri very obtuse and blunt but evident; first discal costa broad but feeble, scarcely being more than a tumid ridge, the second very broad but more or less distinct, usually with fine distinct crest, the dorsal space across the suture between the second ridges convex to almost flat, outside the second ridge steeply declivous, the acute margin ending at some distance from the apex; surface with large but feeble rugæ, almost even laterally, without evident granules or hairs; abdomen sparsely, not very coarsely, asperulately punctate, less sparsely so medially. Length 17.0–18.0 mm.; width 8.7–9.6 mm. Texas (Alpine),—H. F. Wickham.

sycophanta n. sp.

Under the species identified above as sordida, because of its small prothorax, I have included a number of subsidiary forms, represented for the most part by single specimens, and have simply quoted from the original description of the author for its characterization, being compelled for the time being to merely indicate its probably correct place in the series. The forms here described as species are all valid with, I think, scarcely any doubt, and it is probable that a number placed as subspecies will also prove rather to be species than of subordinate weight, this being especially the case with obesa, furtiva, fulvisetis and imperfecta. The conspicuous modification of the last ventral segment in the female of procrustes is such an isolated character in the genus, that I have sometimes thought it might be accidental; its bilateral symmetry would however seem to indicate that it is normal to the species, which is obviously distinct from its fellows in many other characters as well. It is impossible to prove, because of limited material, whether the peculiar free ends of the costæ in fulvisetis and imperfecta, there being not the faintest indication of the usual posterior union, is a constant character or not; if constant these forms would be species without a doubt, but meanwhile I have given the character no weight at all, the subspecies being separated wholly on general features of form and sculpture.

The Mexican rugosissima and interrupta, of Champion, also belong to Glyptasida, the latter probably being one of the subspecies of agra Lec. Of the former I have a large series from Durango.*

^{*}Rugosissima is a species evidently distinct from sordida, or any other of the American species, being smaller, shorter, more convex, duller, more rugose and invariably coated

Pe'ecyphorus Sol.

Philolithus Lac.

As originally organized by Solier this genus was a composite, no two of his four species being assignable to any one genus, but, as he figures the mouth-parts of mexicanus only, and as this is the only one having the large scalene terminal joint of the maxillary palpi—a sexual character as previously stated,—it is certainly proper to assume mexicanus as the type of Pelecyphorus. It seems probable furthermore, judging by the description, that mexicanus is a species allied somewhat to the agrotus—morbillosus type and that - in a broad sense, therefore, Philolithus of Lacordaire must be considered a synonym. In the genus *Pelecyphorus* the general outline of the body is quite different from that of Glyptasida, in having the anterior parts much smaller when compared with the hind body and in the truncate to broadly lobed form of the thoracic base, the hind angles never being posteriorly produced as they are in that genus, although occasionally posteriorly oblique as in ægrotus. The elytra have the two discal costæ of Glyptasida, but the inner one is very much reduced in prominence and is frequently obsolescent; the ligula and palpi are also nearly as in Glyptasida. The prosternum between the coxæ is longitudinally impressed along the median line; it slopes posteriorly much more gradually than in Glyptasida, its truncate apex being more prolonged over the apical margin of the mesosternum, this form of the prosternum constituting a constant and very important difference between the two genera. The outer apical angle of the anterior tibiæ varies somewhat; in some species, such as carinatus, the type of Philolithus, there is hardly any eversion; but in others, such as agrotus and actuosus, the acute angle becomes rather prominent occasionally, though never very strongly so as it is in Euschides for example; the tibiæ are rather more cylindrical than in some other genera.

The species and subspecies of this, one of the more characteristic of the American genera of the tribe, are numerous and those within our faunal limits may be assigned to three very distinctly separated groups as follows:

with a dense crust of argillaceous material, from which the American species are generally almost free, indicating some differences in habit; for "adobe mud" is as all-pervading in New Mexico as it is in Durango. The prothorax is very broad, convex and has two small oblique smooth areas.

These groups in reality have the nature of subgenera; if they are ever so designated the second will take the name *Philolithus* Lac.

Group I—Type agrotus Lec.

Elytra with the inner of the two discal costæ wholly obsolete and not even traceable, the second costa ending posteriorly in an acute prominence. Black, opaque throughout and glabrous, the elytral rugæ more shining; head broadly impressed, finely, sparsely punctate, the antennæ nearly as in the preceding genus, almost as long as the prothorax, the latter about as long as wide, not quite three-fifths as wide as the elytra, inflated and with the sides strongly and evenly rounded anteriorly, narrowing thence with broadly sinuate sides to the basal angles, which are obliquely acute and prominent; base posteriorly sinuate toward the angles; apex moderately sinuate, the angles obtusely prominent and very feebly subeverted; surface feebly convex, closely and rather coarsely punctate medially, though finely punctate apically, becoming broadly concave, coarsely and densely punctate laterally, nearly smooth along the edge, which is but feebly and obtusely subcrenulate, thick and very sensibly and broadly reflexed; elvtra oval, widest at the middle, with rounded sides and broadly rounded humeri, the basal margin not prominent laterally; apex rather narrowly produced and lobiform; surface nearly flat, the rugæ strong, well separated, disappearing on the apical lobe, the discal costa ending at the summit of the declivity, the marginal carina strong, curving inward rather abruptly behind for a short distance and rapidly disappearing; abdomen with sparse and even punctures, which are moderately coarse and deeply perforate; legs very long, slender, the tarsi long, the claws very well developed, the tibiæ and tarsi hispid with very small stiff setæ. Length 17.0-18.0 mm.; width 8.75 mm. Lower California (Cape San Lucas).....ægrotus Lec. A—Similar to ægrotus but larger, deep black, less opaque, the elytral

A—Similar to *ægrotus* but larger, deep black, less opaque, the elytral rugæ shining; prothorax distinctly wider than long, nearly three-fourths (\varnothing) to three-fifths (\diamondsuit) as wide as the elytra, flatter medially than in the preceding species, with the punctures somewhat small and sparse, finer anteriorly, the surface very broadly and

feebly reflexo-explanate and densely, confusedly punctate laterally, strongly, transversely rugose near the edge, which is only moderately thick and finely, strongly crenulate; elytra nearly as in $\alpha grotus$, more elongate and with the side margins strongly and abruptly though narrowly reflexed; abdomen less opaque, strongly alutaceous, rather finely but strongly, very sparsely punctate throughout; legs nearly as in $\alpha grotus$ but with the hind tarsi rather more slender though less elongate; last joint of the maxillary palpi but slightly scalene (\circlearrowleft), to smaller though with comparatively little difference in shape (\circlearrowleft). Length 18.5–19.5 mm.; width 8.5–9.5 mm. Lower California...limbatus n. subsp.

- 2—Elytra much inflated, nearly twice as wide as the prothorax in the female. Blackish-piceous, subopaque, the elytral rugæ shining; head transversely, feebly impressed, finely, sparsely punctate, each puncture with a small coarse and very pale subdepressed and conspicuous hair; prothorax a third or fourth wider than long, threefifths as wide as the elytra (σ^1) , convex and coarsely, deeply, very confluently punctate throughout, with some smooth areas sublaterally toward apex, broadly explanate laterally, the edge but feebly reflexed, evidently and rather acutely serrulate, widest and broadly rounded at the sides before the middle, the sides converging thence basally, becoming nearly parallel near the basal angles, which are right, the apical angles not prominent, not at all everted; elvtra not quite one-half longer than wide, widest at the middle, with evenly arcuate sides; surface with the costa strong, the space between them across the suture flat, outside of them rapidly sloping, the ruge well separated, the lateral edges very finely explanate; concavities between the rugæ with smaller and sparse swollen punctures, not evidently pubescent; abdomen finely, sparsely punctate, each puncture with a very minute pale hair. Length (♂,♀) 18.0-18.5 mm.; width 9.5-9.7 mm. Arizona,—Levette.....corporalis n. sp. Elytra never much inflated, never much more than one-half wider than

thirds longer than wide, widest at the middle, with evenly arcuate sides, the surface notably convex, flat between the broadly, feebly and obtusely elevated suture and the costa, which is strong; rugæ fine, slightly shining, well separated, transversely tortuous laterally, the edge not at all thickened or reflexed, the depressions very opaque, with close and very feeble small tumidulous rugulosity; abdomen alutaceous, finely, moderately closely punctulate, the last segment strongly and closely, each puncture with a minute pale glistening hair. Length (\mathfrak{P}) 20.0 mm.; width 9.6 mm. Arizona.

reptans n. sp.

First costa evident though vestigial and sometimes only formed by a succession of more pronounced or more longitudinal detached rugæ. 4

4—First costa very oblique, joining the suture at about the middle of the length. Form rather narrow and elongate, moderately convex, black, opaque, the elytral rugæ slightly shining; head only very slightly impressed, the small pale hairs very coarse; prothorax three-fifths as wide as the elytra, about a third wider than long, widest near the middle, the sides serrulate, rounded, converging and less arcuate to the blunt and subeverted apical angles and less convergent posteriorly and rounding to the parallel and straight portion before the basal angles, the latter right and not very blunt; surface medially convex, coarsely, very densely and confluently punctate, broadly concavo-explanate and transversely rugose laterally; elytra three-fourths longer than wide, elongate-oval, with rounded sides, widest at the middle, the surface sharply and not densely, transversely plicate, the medial costa rather strong, the short oblique one feeble but distinct; depressed parts opaque, feebly and finely, tumidularly punctate, each puncture bearing a very minute and suberect pale and obvious hair; abdomen alutaceous, strongly micro-reticulate, finely, not densely punctate and with small pale hairs, the terminal segments more coarsely but not densely punctate. Length (9) 17.7 mm.; width 8.4 mm. Without locality label but probably from southern Arizona.....socer n. sp.

5—Discal costa unusually strong, the space between them and across the sutural regions nearly flat......6

6—Body rather narrow and elongate, unusually flat above, dark rufopiceous, dull, the elevations shining; head densely opaque as usual, the sparse pale hairs distinct; prothorax about a fifth wider than long, the converging sides basally becoming parallel or even feebly everted near the basal angles; base transversely rectilinear throughout; surface coarsely, deeply, closely and irregularly punctate, gradually deplanate but punctured and scarcely at all transversely rugose laterally, each puncture bearing a small yellowish hair which is unusually evident; elytra elongate-oval, one-half wider than the prothorax, three-fifths longer than wide, widest at the middle, the surface with strong and abruptly formed but unusually few and widely separated rugæ, the interspaces slightly uneven and with numerous small granuliferous punctures, each bearing a very minute but evident hair; abdomen smooth, alutaceous, finely, not densely punctate, with the usual small pale hairs very distinct. Length (3) 15.6 mm.; width 7.0 mm. Arizona.....abscissus n. sp.

8—Body black, opaque; prothorax rather longer than wide, the sides broadly rounded, serrate, posteriorly subangulate; basal angles right; surface variolate, toward the sides broadly subdepressed and plicate; elytra twice as wide as the prothorax, rounded-oval, strongly declivous posteriorly and subacute, truncate at base, the humeri [not strictly the humeri, which in this entire section are broadly rounded and subobsolete, but more properly the sides or ends of the basal margin] dentiform; margin, and, on each, two costæ—the internal the finer,—elevated and connected transversely by irregular elevated folds; epipleura nearly smooth. Length 18.7 mm. Mexico (Sonora).....*morbillosus Lec.

A—Moderately stout, the prothorax unusually small, black, the upper surface feebly reddish-black; head densely opaque, with scattered pale hairs; prothorax less opaque, only just visibly wider than long, the rounded sides converging basally, becoming straight and parallel for some distance before the angles, which are right, not at all rounded; base with a broad and feeble sinus medially; surface very unequally punctate, with large impunctate spaces sublaterally, the sides deplanate and coarsely, coalescently punctate; each puncture has a small but obvious pale suberect hair growing, as usual, from its anterior margin; elytra nearly two-thirds wider than the prothorax, three-fifths longer than wide, of the usual form, the rugæ rather large, swollen, moderately close and somewhat shining, the depressions nearly smooth but opaque, the inner costa represented only by a succession of detached sinuous rugæ; abdomen alutaceous, finely, closely rugulose, finely punctate and

with the small pale hairs distinct. Length (5) 15.0-16.0 mm.; width 7.1-7.8 mm. Southern Arizona (Baboquivari Mts.),—F. H. Snow.....sobrius n. subsp.

B—Form nearly as in sobrius, but with the elytra much more shining. the depressions as lustrous as the rugæ, piceous-black, the prothorax relatively even larger; head somewhat as in sobrius but with finer pale hairs; prothorax (6) nearly three-fourths as wide as the elytra or two-thirds (Q), as in *sobrius* but with the punctures less coarse and widely separated though unequally so, the flanks of the median convexity almost free from punctures, the broad lateral deplanate area coarsely, closely, transversely rugose and punctate; transverse base with the median sinus of the preceding barely at all traceable; elytra much smaller and less elongate in the male than in the female, the rugæ laterally strong and rather close-set, smaller and more comminuted medially, the depressions not obviously granulate; inner disjointed costa feeble, lost altogether from slightly behind the middle, the outer costa stronger in the male; abdomen nearly as in sobrius. Length (3, 9) 14.0-17.5 mm.; width 6.8-7.9 mm. Arizona,—Warren Knaus.

pacatus n. subsp.

Body grayish-black, opaque, very much smaller in size and more slender; head feebly impressed, the sparse hairs unusually short; prothorax two-fifths wider than long, the arcuate sides becoming gradually very feebly sinuate basally but not straight or parallel even at the basal angles, which are very slightly more than right, not rounded; base with a very broad and rather feeble median sinus; surface not very coarsely, deeply, rather closely but not very coalescently punctate, with a transversely arcuate impression across the convex part and with numerous impunctate areas, rather narrowly deplanate and finely, transversely plicate laterally; elytra scarcely two-fifths wider than the prothorax, fully two-thirds longer than wide, evenly elongate-oval; surface with the rugæ rather small in size, well separated and only rather feebly elevated, not noticeably more shining, the interspaces with a few minute scattered granules, the costa rather feeble but fine and distinct, the inner costa very feeble, obsolete posteriorly; abdomen finely, not very sparsely punctate, the pale hairs evident. Length (3) 13.0 mm.; width 4.8 mm. Arizona (Huachuca Mts.).....parvus n. sp.

9—Form stouter, more oblong, the elytral humeri broadly rounded as usual though rather obvious. Dark rufo-piceous in color, opaque, the elytra in great part notably shining even in the depressions, which do not differ sensibly in lustre from the rugæ; sexes not differing very much in outline; head feebly impressed, the sparse pale hairs shorter than usual; prothorax large, a fourth to third wider than long, the sides rather strongly serrulate, rounded, converging and broadly sinuate posteriorly as usual but becoming parallel near the angles, which are minutely acute and subprominent laterally; base very feebly sinuate in median third; surface only very moderately convex, with the punctures well separated, small anteriorly,

becoming coarse and closer near the base, very broadly explanate, coarsely, closely, transversely rugose laterally, the edge narrowly and very feebly subreflexed; elytra about one-half wider than the prothorax, suboblong, only moderately elongate, a little shorter and broader in the female, the costa distinct, the inner costa distinct though much feebler, finely sinuous, joining the median costa posteriorly; rugæ very numerous, small, strong and close-set, the interspaces not evidently punctate; abdomen finely but strongly punctate, rather closely so medially in the female. Length $(\mathfrak{S}^1, \mathfrak{P})$ 15.5–16.0 mm.; width 7.5–7.9 mm. Arizona (in various southern localities).

piceus n. sp.

10—Deep black, opaque; head feebly impressed, with very sparse fine punctures and evident subdecumbent pale hairs as usual; prothorax from a fourth to a third wider than long, three-fifths to nearly threefourths as wide as the elytra (\emptyset^1) , or relatively slightly smaller (\mathcal{Q}) , of the usual form in this section, the converging sides basally becoming parallel for a slight distance before the basal angles, which are right; base with a very feeble and indefinite median sinus; surface densely opaque, rather coarsely, deeply, confusedly and closely punctate, broadly explanate laterally, transversely rugose along the side margins, which are very feebly reflexed; elytra nearly threefourths longer than wide, in sculpture nearly as in crudelis, densely opaque, the summits of the very numerous rugæ only feebly shining, the depressions finely, closely uneven; abdomen finely punctate and with the usual very small pale hairs. Length (3, \$\tilde{9}\$) 14.0-16.3 mm.; width 6.0-7.6 mm. Arizona (San Bernardino Ranch, Cochise Co.),—F. H. Snow.....snowi n. sp.

Dark rufo-piceous, much less opaque and more elongate, with relatively larger prothorax and longer, as well as decidedly thicker, legs; head with the stout decumbent pale hairs longer and much more numerous; prothorax (3) fully three-fourths as wide as the elytra, a third wider than long, nearly as in snowi but with the close-set punctures more equal in size throughout and with the small pale hairs more distinct; elytra slightly more elongate, fully three-fourths longer than wide, flatter, widest somewhat behind the middle, the

humeri slightly evident, the feeble inner costa distinct and joining the outer near apical fifth, the rugæ numerous, close-set and strongly shining, the interspaces not so densely opaque as in *snowi*, nearly smooth; abdomen opaque, nearly similar. Length (3) 15.0 mm.; width 6.5 mm. Arizona (San Bernardino Ranch, Cochise Co.,—3750 feet),—E. G. Smyth......subtenuis n. sp.

The species described under the name *morbillosus*, by LeConte, is generally identified as any one of the forms from *corporalis* to *subtenuis* in the above table. I have selected to represent that local Sonoran species, a specimen of rather large size and deep black opaque integuments, with rather fine, tortuous and widely separated rugæ, collected by Prof. Snow in the Baboquivari Mts.; it has a very distinct and broadly subangulate sinus opposite the scutellum. These numerous allies of *morbillosus* are all built upon the same plan, presenting very few diversities of structure and are therefore difficult to define recognizably, though readily separable on sight.

Group II—Type carinatus Lec.

Basal angles of the prothorax more or less briefly, obliquely prominent and acute......2 2—Body stout, convex, deep black, subopaque throughout, the elytra alutaceous; head feebly impressed, finely and sparsely punctate, the minute hairs erect, dark and indistinct; prothorax very nearly as long as wide, parallel, widest slightly before the middle, the sides evenly and moderately arcuate, becoming slightly sinuate very near the basal angles; base transverse, slightly sinuate near the angles; surface convex and longitudinally, sharply crested medially, the crest obsolete basally, rather abruptly, feebly reflexed at the sides, the punctures small and separated anteriorly, large and coalescent basally, equal but rather coarse and contiguous laterally, the reflexed edge impunctate but granulate and plicate, very thick, feebly crenulate; elytra two-thirds (\mathcal{O}) to four-fifths (\mathcal{O}) wider than the prothorax, fully one-half longer than wide, evenly oval, widest at the middle, deeply constricted just behind the basal margin, the ends of which are laterally prominent but not very acute, not so strongly as in the *morbillosus* section; surface evenly convex, finely and feebly, transversely rugulose, the outer costa feeble, the inner almost to quite obsolete, the former extending only to the summit of the convex declivity, the side margin almost attaining the tip; abdomen more or less rugulose laterally, rather finely but strongly, somewhat sparsely muricato-punctate, each puncture with a very small dark and inconspicuous hair; male and female similar, except that the prothorax is a little larger and the legs notably longer and thicker in the former. Length (♂, ♀) 20.0-22.0 mm.; width 10.0-11.3 mm. Southern California (near Colorado Desert),—G. W. Dunn.

carinatus Lec.

Body very much more slender, very convex, deep black, anteriorly opaque, the hind body shining; head obsoletely impressed, finely, very sparsely punctate; prothorax (♀) small, about as long as wide, widest slightly before the middle, parallel, the sides broadly, feebly arcuate, slightly sinuate basally, the basal angles rather strongly, obliquely prominent and acute; surface as in *carinatus* but with the punctures very small, largely wanting on the slope of the carina anteriorly, stronger, closer laterally, the edge narrowly and distinctly reflexed and finely crenulate; median carina extending almost to the base; elytra nearly three-fourths longer than wide, evenly oval, very strongly, evenly convex from side to side, almost smooth, feebly, irregularly wrinkled, with some short transverse impressions along the margins and costa; inner costa obsolete, represented by a feeble swelling; abdomen alutaceous, closely, strongly and asperulately punctate and with minute blackish hairs. Length (9) 18.5 mm.; width 8.4 mm. California (San Felipe).....sophistes n. sp.

Among the three examples of *carinatus* before me the male is decidedly larger than either of the two females, but does not differ much in form, except in the evidently larger prothorax and the notably longer as well as thicker legs.

Group III—Type actuosus Horn.

2—Form strongly ventricose in both sexes, deep black, moderately opaque, the elytra and abdomen rather shining; head feebly, indefinitely impressed, finely and sparsely punctate, the minute hairs erect, dark and inconspicuous; prothorax a third to nearly half (\$\varphi\$) wider than long, widest slightly before the middle, scarcely more than

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half as wide as the elytra, the sides subevenly rounded from apex to base, the basal angles abruptly feebly and minutely prominent, the apical everted and prominently acute, the broadly arcuate base broadly, feebly bisinuate medially; surface broadly, evenly convex, becoming gradually broadly and strongly reflexed laterally, the punctures small, sparse and nearly simple, becoming larger, stronger and mingled with transverse plice near the edge, which is feebly and irregularly crenulate; elytra two-fifths to one-half longer than wide. widest at the middle, the sides evenly arcuate, the humeri obliterated, the oblique sides basally feebly sinuous to the base, which is not dentate laterally; surface nearly smooth and punctureless, the costa very strongly elevated, narrow and acute, the surface suturally between them flat, exterior to them very steeply declivous, the inner costa obsolete and barely at all traceable; abdomen finely, sparsely punctate, slightly more closely so and more or less longitudinally and closely plicate at the base of each segment; legs very long and slender, shorter in the female. Length $(\emptyset^1, \mathcal{P})$ 20.0-21.0 mm.; width 11.2-Arizona (Yuma).....adversus n. sp.

Form moderately ventricose (\emptyset) or very strongly so (\emptyset), grayish-black, densely opaque throughout above, more or less shining beneath; head very broadly, indefinitely impressed, with rather small, well separated punctures, the hairs dark and minute; prothorax relatively small, one-half wider than long, the apex slightly to decidedly narrower than the base, moderately and circularly sinuate, the angles not very acute, not everted; sides strongly rounded and subprominent at the middle, converging becoming straight apically, equally converging posteriorly, feebly arcuate and becoming sinuate very near the basal angles, which are minutely acute and subprominent; base transversely rectilinear; surface feebly convex, very finely, rather sparsely punctate, the punctures slightly asperulate, the sides broadly, very strongly reflexed and transversely, irregularly and coarsely rugose, the edge thin and strongly, irregularly crenulate; elytra evenly oval, widest at the middle, one-half (\emptyset^1) to a third (\mathcal{P}) longer than wide, two-thirds wider than the prothorax in the former to about twice as wide in the latter, the apical lobe moderate in size, rather distinct; surface flat across the suture between the strongly elevated, thin and acute medial costæ, rapidly sloping thence to the acute and crenulate side margins, the punctures very minute, remotely scattered and granuliferous; inner costa barely traceable; abdomen asperulately and somewhat finely punctate; legs moderately long, very slender, subsimilar in the sexes. Length (\eth, \lozenge) 16.0-20.0 mm.; width 8.4-12.0 mm. California (Upland, San Bernardino Co.),—Fuchs......reflexus n. sp.

3—Pronotum not at all granose but simply punctured. Body large, suboblong, ventricose, dull in lustre, the elytra shining, deep black, glabrous; head unimpressed, nearly flat above, finely, evenly and rather sparsely punctured, each puncture with an extremely minute hair; prothorax rather well developed, nearly a third wider than long, widest before the middle but with the sides broadly rounded, mod-

erately converging, becoming straight posteriorly to the obtuse but sharp though not at all prominent basal angles, the surface broadly, evenly convex medially and with small but deep and perforate, rather close-set and perfectly simple punctures, mingled with a few that are very much smaller, the punctures becoming a little smaller on the lateral slopes of the convexity and, toward the sides, coarser and sparser though similar in form; elytra oblong-oval, more than two-fifths longer than wide and, rather behind the middle, almost three-fourths wider than the prothorax, the discal carina on each strong, the space between them and across the suture flat. the inner carina wholly obsolete, the general surface smooth, shining, with very small and sparse granules, becoming very minute and obsolescent toward the suture; legs moderate, cylindric, the hairs very small, fine, sparse and inconspicuous, the tarsi notably short. Length 22.0 mm.; width 12.4 mm. The type probably Southern California.....opimus n. sp. Pronotum granulate, the granules more or less small and well separated. 4 Pronotum densely granulato-tuberculose throughout......5 4—Form stout and strongly ventricose, black; head opaque, finely granulate; prothorax quadrate, broader than long, the sides moderately rounded, the margin finely crenulate, the apex emarginate with the angles acute; base nearly truncate, the angles rectangular; surface coarsely punctate along the margin, finely granulate medially; elytra rounded-oval, very convex above, opaque, finely and sparsely granulate, the basal margin denticulate at the sides, the latter margined; surface with the outer costa extending two-thirds the length of the elytra, the inner costa obsolescent; under surface opaque, finely punctured. Length 14.5-23.0 mm.(!) California (Owen's Valley). [Asida actuosa Horn].....actuosus Horn Form much more slender, smaller in size, black, opaque, the prothorax about two-fifths wider than long and two-thirds as wide as the elytra: head minutely, rather closely punctate, the punctures gradually but feebly asperulate posteriorly; prothorax widest but little before the middle, with strongly rounded sides, converging and less rounded apically and basally, strongly crenulate, the apical angles minutely everted and acute, the basal obtuse but denticulate externally; base broadly, rectilinearly truncate medially, thence anteriorly oblique and arcuate to the angles; surface rather strongly convex medially and with strong tuberculiform granules, becoming very fine on the slopes of the medial convexity, broadly and feebly concavo-deplanate laterally and more densely, rather coarsely rugulose; elytra very evenly elongate-oval, one-half longer than wide, the ends of the basal margin acutely dentiform, the general surface transversely, rather strongly convex throughout, finely, sparsely granulate, the outer costa fine but rather strong, the inner evident though feeble, joining the outer a little behind apical third; abdomen finely, asperately punctate. Length (\mathcal{O}) 16.0 mm.; width 7.8 mm. Utah (southwestern),—Weidt.....haruspex n. sp.

A—Somewhat as in haruspex but much more elongate, piceous, the

elytra brownish-rufous; head very finely, simply punctate throughout; prothorax small, almost as long as wide, widest at the middle, the sides there strongly rounded, converging and straighter apically and basally, strongly crenulate throughout, the apical and basal angles acutely dentate, the former slightly everted; median convexity with moderate punctures, which are strongly, obtusely asperate but not tubercularly granose, the broadly deplanate and feebly concave sides not rugose but with rather coarse, widely separated, simple punctures; elytra very regularly elongate-oval, almost three-fourths longer than wide and almost twice as wide as the prothorax, the ends of the basal margin strongly dentate, otherwise nearly as in haruspex, except that the surface is much less opaque, alutaceous and somewhat shining and the inner costa, instead of being unusually evident is almost completely obsolete; abdomen more shining and more strongly, asperately punctate. Length (2) 18.5 mm.; width 8.8 mm. Utah (southwestern),—Weidt.....ellipsipennis n. subsp.

Form very ventricose, the anterior parts relatively much smaller than in any of the preceding species, deep black, opaque, the elytra more alutaceous; head finely, not densely, asperulately punctate: prothorax less than half as wide as the elytra, two-fifths to one-half wider than long, widest near the middle, the sides rounded and finely, unevenly crenulate, the apical angles acute, feebly everted, the basal obtuse, not rounded, sometimes with a minute, laterally prominent point; base broadly arcuate, more truncate medially; surface moderately convex, with the granules strong and intermingled with more minute ones medially, gradually becoming narrowly explanate, densely and moderately rugose laterally; elytra much inflated, evenly oval, about one-half longer than wide, the sides of the base parallel for a very short distance but scarcely prominent; surface rather strongly, evenly convex throughout the width, finely, not densely granulate, the outer costa rather fine but strong, the inner very fine and subobsolete though evident: abdomen finely, closely, subgranularly punctate. Length (♀) 18.5-19.3 mm.; width 11.5 mm. Nevada (Goldfield, Esmeralda Co.),—Nunenmacher.....pantex n. sp.

5—Body much smaller, narrower and more parallel than in any of the preceding, deep black, rather shining; head feebly impressed, finely, densely, asperately punctate, the minute erect hairs indistinct; prothorax small, slightly transverse, widest evidently before the middle, the sides feebly crenate, rounded, gradually feebly converging and straighter basally, becoming very feebly sinuous just before the angles, which are right, not prominent, the apical obtuse, slightly blunt, not at all everted, the apex unusually feebly sinuate, the base broadly arcuate, feebly sinuate medially; surface very broadly, evenly convex, densely granulato-tuberculate, rather rapidly sloping laterally and very narrowly explanate and more confusedly rugose at the sides; elytra oblong, parallel, with feebly arcuate sides, three-fifths longer than wide, fully twice as wide as the

6-Form rather narrower, more constricted, the hind body more pyriform, black, dull in lustre; head densely punctate; prothorax obtrapezoidal, distinctly wider than long, widest at apical third, the apex feebly sinuate, the angles not prominent anteriorly, the sides arcuate in front, oblique behind, the hind angles right, not prominent; surface rather strongly convex, densely and rather roughly punctate, more roughened at the sides and base; elytra oval, broadest behind the middle, one-half longer than wide, the base equal in width to the thoracic base, the humeri oblique; marginal costa extending to apical fourth; surface convex, with a distinct and rather strong costa extending beyond apical third, within this costa a much fainter one, nearly as long and slightly oblique to the suture; surface finely and moderately closely granulate; prosternum coarsely, closely punctate; propleura punctato-granulate; meso- and metasternum granulate; abdomen muricately punctate, more coarsely at the sides; legs muricately punctate and with short hairs. Length 13.0 mm. Oregon. [Asida densicollis Horn]......densicollis Horn

The various species of the third subgeneric group of *Pelecyphorus* are more strongly differentiated among themselves than in the two others and will prove to be rather numerous. The drawing of *densicollis* given by Horn (Proc. Cal. Acad., Ser. 2, IV, plate vii), indicates a species widely different in appearance from *corrosus*, although they are both much more strongly and densely sculptured than the others; they form a peculiar northern section of the group. In his description, Dr. Horn states that the medial costa in *actuosus* extends to apical third, whereas in the figure it is drawn nearly to the elytral apex. I have a specimen from San Bernardino, Cal., which corresponds very nearly with this figure.

Gonasida n. gen.

With a general habitus suggestive of some forms of *Euschides*, such as *angulatus*, and with a similar thoracic base, but other characters harmonizing more closely with *Pelecyphorus*, such as the small and retractile ligula and form of the prosternum, this genus differs from either of those genera in the remarkable form of the

prothorax, with its dilated and aliform reflexed angulate sides, tarsal vestiture of rather long recumbent fulvous hairs and in the nature of the elytral sculpture, which is suggested nowhere within the limits of those large and rather polymorphous genera. The body is elongate-suboval, constricted at the waist, convex and virtually glabrous. The head, palpi, eyes, epistoma and antennæ are nearly as in *Pelecyphorus*, the mentum large, rounded at the sides, resting upon a very pronounced gular pedestal, leaving the maxillary cardo basally exposed within the large lateral openings, the projections bounding the buccal cavity unusually short. ligula is small, thick, its apex transversely concave, the upper edge of the concavity acutely ridged, and it may either have its apex slightly exposed or be completely withdrawn under the mentum, in a manner resembling Microschatia, Glyptasida and Pelecyphorus, but notably different from that of Euschides. The elytra each have, except in gravida, three distinct double impressed discal striæ, with the included lines convex, the lateral one generally incomplete or in great part obliterated in the general rugosity, and there is another flatter one margining the suture; these double lines are separated widely by confusedly rugose to nearly smooth intervals, which may become rather strongly convex but are generally feebly so; the angulate lateral margin is evident as a rule but rather obtuse and never cariniform. The legs are long and slender, apparently not differing so much sexually as is the rule in *Pelecyphorus*, the tarsi cylindric, relatively rather short, and the anterior tibiæ are strongly everted externally at tip and acute though not spiniform. The prosternum between the coxæ is almost exactly as in *Pelecy*phorus, being gradually declivous posteriorly, with its truncate apex somewhat expanded upon the margin of the mesosternum.

The species and subspecies are moderate in number; those in my cabinet may be known by the following descriptions:

elytra, the deep apical sinus much narrower than the base, the latter transverse, feebly arcuate at the sides, very broadly and feebly sinuate medially; surface broadly, very feebly convex, extremely minutely and remotely punctulate, becoming broadly, rather rapidly and strongly reflexed, flattened and coarsely rugose in transverse sinuous folds laterally, with a few coarse, sparse punctures in the concavity at the origin of the reflexure, the side margins feebly crenulate and thin, acutely and prominently angulate at the middle, thence converging and broadly arcuate to the everted and acutely prominent apical angles and rather less converging, broadly and evenly sinuate throughout to the very obtuse but not rounded basal angles; scutellum equilatero-triangular, tumid, shining; elytra widest very slightly behind the middle, twice as long as wide, gradually acute in apical two-fifths, very gradually and moderately declivous behind, the sides moderately converging and arcuate to the truncate base, which is acutely dentate laterally, but scarcely as wide as the thoracic base, the surface very strongly, evenly convex, with close-set, broadly and feebly impressed, very unevenly rugulose, subequal lines throughout the width, the intervals but feebly convex, confusedly rugulose though shining and subimpunctate, the lateral margin very obtuse and obsolete, barely traceable; abdomen minutely, remotely punctulate; legs moderately slender, very elongate, the hind tibiæ very strongly bent. Length (9) 30.0 mm.; width 12.8 mm. Arizona.... gravida n. sp. Elytra with the raised lines very distinct, convex, separated by wide

3-Angulate sides of the prothorax narrow, deplanate but only just visibly reflexed. Body narrower, black, the hind body dark rufopiceous throughout; head distinctly tri-impressed, the posterior impression feeble, the punctures rather small and well separated; prothorax barely three-fifths as wide as the elytra, about a third wider than long, widest very evidently before the middle, where the angle is rather blunt, the sides converging and arcuate to the small and everted but rather blunt apical angles, moderately converging and sinuate to the basal angles, which are obtuse; apex only moderately sinuate and nearly as wide as the base, the latter as in gravida, except a small feeble prominence opposite the scutellum; surface with the small sparse punctures more evident, rather strong near the apex, coarse laterally, the marginal region more narrowly rugose; scutellum similar; elytra twice as long as wide to rather more, evenly elongate-oval, widest near the middle, the basal margin laterally dentate; surface not very shining, more or less strongly, evenly convex, the fine even raised lines rendered very distinct by reason of the unusually strongly, closely and evenly rugose, broad and perfectly flat intervals; abdomen polished, very minutely, remotely punctulate; legs similar, the hind tibiæ strongly, more evenly arcuate throughout their length. Length 25.0-26.0 mm.; width 10.5-10.9 mm. New Mexico (Santa Fé).....inferna n. sp.

Angulate sides of the prothorax more acute, broader and distinctly re-

flexed, the prothorax widest slightly before the middle, the thin edges not or only very feebly crenulate.....4

4—Scutellum equilatero-triangular, nearly flat; apical angles of the prothorax rounded, not at all everted. Form moderately stout and convex, piceous-black, the elytra rufous, clouded with piceous laterally; head feebly impressed, the punctures distinct, moderately close-set, each with the very minute hair pale and evident; prothorax one-half wider than long, the sides and base as usual, the latter broadly arcuate, with the broad feeble median sinus rather distinctly limited: punctures fine and sparse, the surface broadly, evenly, rather feebly convex, gradually becoming coarsely but loosely punctate in the lateral concavity, the moderately wide, strongly reflexed sides transversely rugose and coarsely punctate; elytra (?) sensibly less than twice as long as wide, one-half wider than the prothorax, evenly oval, evenly but only moderately convex above, feebly depressed narrowly along the suture, the sides of the base feebly prominent, the surface alutaceous, the feebly convex lines separated by broad rugose intervals, over which are scattered sparse fine punctures, the third and fourth intervals more convex and not so broad, the lateral margin rather acute and well marked; abdomen occupying fully half the entire length, minutely, sparsely punctate; legs nearly as in inferna. Length (♀) 25.0 mm.; width 11.5 mm. Kansas (Gove Co., 2500 ft.), F. H. Snow. compar n. sp. Scutellum longer than wide, acutely pointed, not tumid; apical angles of

5—Body large, much elongated, convex, shining, piceous-black, the elytra dark rufous, dusky at the sides; head deeply, obliquely bi-impressed, finely, sparsely punctate; prothorax nearly as in compar but with the apical angles acutely everted and prominent; scutellum nearly twice as long as wide, very acute; elytra fully twice as long as wide, oval, convex, gradually acute behind, the surface but very faintly alutaceous, the rather wide convex lines separated by intervals which are only a little wider than themselves, quite as convex and only very feebly rugulose, the small and sparse punctures throughout irregular in size and shape, some being rather elongate, this character being more marked than in compar; abdomen shining, very obsoletely rugulose, minutely and remotely punctate; legs long and slender, the hind tibiæ evenly and feebly bowed; hairs on the under side of the tarsi long and deep fulvous-red. Length 27.5 mm.; width 11.8 mm. Texas and New Mexico. [Pelecyphorus elatus Lec.]....elata Lec.

A—As in *elata* but smaller and more slender, the elytra more evidently striate, black; prothorax slightly shorter than wide, the sides broadly and gradually reflexed, rounded anteriorly, angulate in the middle, and, thence to the base, sinuate; base truncate, the posterior angles almost right; surface medially sparsely and finely, laterally more coarsely and rugosely, punctate; elytra slightly wider than the prothorax, elongate-oval, acuminate behind, moderately deeply punctato-scabrous; striæ distinct, broad, moderately

deep; humeri minutely porrect; epipleura abruptly deflexed. Length 23.8 mm. Santa Cruz,—Mexican Boundary Commission. [Pelecyphorus difformis Lec.]......difformis Lec.

- B-Much smaller than *elata*, black, the elytra more or less faintly rufescent suturally; head strongly, arcuately impressed transversely. the small punctures rather sparse, each with a very minute pale hair; prothorax one-half wider than long, three-fifths to twothirds as wide as the elytra, as in *elata* but with the apical angles only feebly and obtusely everted, the reflexed sides not transversely rugose but coarsely, loosely punctate to the edge, with scarcely any rugæ; scutellum even more than twice as long as wide, slender, very acute; elytra not quite twice as long as wide, the posterior acumination more rapid, the sides of the base rather acutely dentiform, the surface very faintly alutaceous, the convex lines narrow, the intervals very much broader, feebly rugose, as convex as the lines (\emptyset) or nearly flat (\mathcal{P}) , the fine punctures as in elata; abdomen hearly smooth, minutely, remotely punctulate. Length $(\emptyset^1, \mathcal{P})$ 20.5-23.0 mm.; width 9.2-10.6 mm. (locality unrecorded).....reducta n. subsp.
- C—Nearly similar but very slender, piceous-black, the elytra wholly rufous, faintly piceous on the flanks; head subopaque, impressed and punctate nearly as in reducta but with the posterior impression along the median line deeper and more evident; prothorax fully three-fifths wider than long, nearly as in reducta, and, similarly, with the apex as wide as the base, but with the apical angles still more obtuse and obsoletely everted and the coarse punctures laterally sparser, the rugæ wholly wanting; scutellum similar; elytra evidently more than twice as long as wide, very gradually acute posteriorly, the base similar, much smoother than in any other form, the lines broad, very feebly convex and not sharply defined, the sutural interval as wide as the first line, the second twice as wide and but feebly convex, the surface scarcely at all rugose, subalutaceous, the fine punctures sparse, very distinct, unequal in size to some extent; side margins acute but not cariniform; hind tibiæ almost straight. Length (3) 25.5 mm.; width Kansas (locality unrecorded).....prolixa n. subsp. 10.0 mm.

Body large, stouter, black, the elytra slightly piceous; head larger than in *elata* and allies, strongly, broadly impressed in transverse arc, with small sparse punctures, each bearing a very small but coarse fuscous hair; prothorax three-fifths wider than long, two-thirds as wide as the elytra, of the same general form and sculpture as in the preceding, the broadly sinuate apex somewhat wider than the base, the apical angles minute, slightly blunt, feebly everted; surface broadly, evenly convex, finely, sparsely punctate, the rather broadly reflexed sides densely, coarsely punctate, becoming transversely and closely rugose along the edge throughout; scutellum broader, nearly one-half longer than wide, very acute; elytra twice as long as wide, more oblong-oval or less narrowed basally, the apex more abruptly produced or lobiform, the sides of the base acutely dentic-

ulate; surface alutaceous, evenly and strongly convex, the lines rather narrow and convex, the intervals broad, scarcely at all convex, rather strongly creased, subrugose and with numerous rather coarse, sparse and very irregular punctures; side margin in the form of an elevated, obtusely rounded, prominent ridge extending almost to the apex; epipleura feebly inflexed, deep as usual, more polished, feebly rugulose and finely, sparsely punctate; abdomen with the punctures sparse but larger than usual, the hind tibiæ very feebly, evenly bowed. Length (9) 27.0 mm.; width 12.2 mm. Colorado (La Junta).....aucta n. sp.

6—Form rather slender, black; head distinctly, obliquely bi-impressed and also impressed on the median line basally, only feebly alutaceous, finely, sparsely punctate, the minute hairs evident; prothorax fully three-fourths wider than long, nearly as in *elata* but with the sides more gradually and broadly reflexed, coarsely, closely punctured and transversely, moderately rugose, the edge with some small punctures only; apex evenly sinuate and as wide as the base, widest at the middle; apical angles very obtuse, scarcely at all everted; elytra evidently more than twice as long as wide, evenly elongate-oval, gradually obtusely acuminate behind, widest at the middle, the sides of the base obliquely prominent; surface evenly, not very strongly convex, only slightly alutaceous, the lines moderate, convex, the intervals about twice as wide and equally convex, nearly smooth, the broadly impressed lines confusedly, closely and rugosely punctured; side margin obtusely elevated, joining the second line near the apex; epipleura with a lower marginal convex ridge extending almost to the base, this character being more developed than usual; abdomen minutely, remotely punctate; legs rather stouter than usual, the hind tibiæ feebly bowed medially, strongly, closely punctatoasperate. Length (3) 25.0 mm.; width 10.0 mm. New Mexico (Grant Co.).....alaticollis n. sp.

Difformis is placed as a subspecies of *elata* on the opinion of G. H. Horn and because the published characters give evidence of no striking differential character, but its locality is rather uncertain.

The genus *Tisamenes*, of southern Mexico, seems to be allied rather closely to *Gonasida*, having a nearly similar form of body, legs and prothorax, but differs in its striking and peculiar vestiture, short antennæ, stiff inferior hairs of the tarsi and in elytral structure, to such an extent that there can be but little doubt of the mutual distinctness of the two genera. *Asida ingens* Champ., will form still another genus, probably not closely allied to either *Gonasida* or *Tisamenes*.

Bothrasida n. gen.

This genus and the following, though having the rough elytral sculpture more characteristic as a rule of the *Pelecyphorus* series,

possesses the tumid, angularly incised and non-retractile ligula of Euschides and other subsequent genera of the tribe. The form of the body in Bothrasida is somewhat ventricose, or with the anterior parts reduced as in *Pelecyphorus*, the eyes differing in having the anterior arcuate margin feebly sinuate near the middle. The antennæ, epistoma, labrum and palpi are of the same general type as in the preceding genera, but the mentum is rather smaller, transversely obtrapezoidal and loosely fitting the sides of the buccal opening, the gular pedestal short and broad, with its flanking apertures small. The legs are noticeably short but slender, the tarsi slender, with short stiff black to fulvous spinules beneath and the anterior tibiæ minutely everted and acute externally at tip. The trochantin is well developed. The prosternum is more strongly declivous behind than in Pelecyphorus and obtusely rounded, descending vertically upon the mesosternal margin; it is generally impressed longitudinally between the coxæ.

The only species in my cabinet at present is the following:

Form moderately ventricose, convex, the upper surface gradually more feebly so, feebly alutaceous, deep black throughout, without metallic lustre of any kind; head declivous toward the depressed epistoma, coarsely, closely punctate and with minute pale hairs; labrum moderately transverse, distinctly sinuate medially at apex, the antennæ not very stout; prothorax a fourth to third wider than long, three-fifths to two-thirds as wide as the elytra, widest slightly before the middle, where the sides are subinflated and rounded, converging and straight thence to the rather blunt tips of the advanced apical angles, converging, becoming gradually deeply sinuate, basally, the angles obliquely very acute and prominent; apex deeply sinuate, slightly narrower than the base, which is deeply bisinuate; surface broadly, moderately convex, coarsely, unevenly and in part subconfluently punctate, becoming rather narrowly concavo-explanate and transversely rugose laterally, toward base broadly excavated along the median line, and, on each side of the latter just before the middle, with a deep circular indentation, also with two or three indentations placed in oblique line near lateral fourth, from before the middle nearly to the base, the middle one in each line the largest and deepest; apical angles with short yellow vibrissæ extending upon the eyes; scutellum very small, equilatero-triangular, somewhat sunken, not shining; elytra two-fifths longer than wide. oval, with arcuate sides, widest slightly behind the middle, the thoracic angles overlapping and within the humeri, each with two large, very obtuse, irregular ridges, the inner the longer, higher, perfectly continuous and nearly straight, the outer feeble and sinuous, the two joined transversely and also with the lateral margin and

narrow even flat sutural lines by transverse ridges thus including large uneven depressions, the surface with rather small sparse punctures throughout; lateral margin rather acute but not in the least carinate or reflexed, disappearing at some distance from the apex; abdomen smooth, rather shining, with small sparse simple and perforate punctures. Length (\mathcal{P}) 14.5–16.0 mm.; width 7.3–8.0 mm. Mexico (Guerrero),—Baron.....*baroni n. sp.

This species is allied rather closely to *clathrata* Champ., but differs in its apparently less elongate form and in the absence of any trace of the faint æneous lustre mentioned by Mr. Champion, who states of *clathrata* also, that the hind thoracic angles are not acute though prominent, the inner ridge of the elytra interrupted and the side margins of the elytra slightly reflexed. I know certainly of no other species than *clathrata*, *funesta* and *baroni* that can be included under *Bothrasida*.

Notiasida n. gen.

The name *Notiasida* is here proposed for another Mexican genus allied rather closely to the preceding and also comprising relatively few species, of moderate or small size. The body is either of parallel or ventricose, moderately to feebly convex form, with the prothorax frequently as wide as the elytra or nearly so, as in Asidopsis opaca and allies. The eyes, epistoma, labrum, mentum, palpi, legs and tarsi are nearly as in Bothrasida, but the gular pedestal is less abbreviated, the antennæ herissate with very stiff spiniform setæ, and the trochantin smaller; the prosternum between the coxæ becomes similarly vertical at tip. The upper surface is not glabrous as in Bothrasida, but clothed sparsely with short and very stout grooved setæ, sometimes becoming squamiform, and the elytra have a very different type of sculpture, consisting on each of three feebly elevated lineiform aggregates of anastomosing elongate glabrous areas, the two inner of which are generally more or less geminate; this appearance is however almost lost as a rule in the females.

The two species known to me by actual examples may be described as follows:

Form parallel, moderately narrow, rather depressed, deep black, rather shining, not densely coated with earthy matter, each puncture of the anterior parts and of the elytral depressions with a very short and extremely stout yellow decumbent seta; head very feebly,

indefinitely impressed, finely, sparsely punctate anteriorly, gradually coarsely, densely and unevenly so toward base; antennæ moderately stout, the spongiose areas of the tenth joint almost uniting on the sides; prothorax two-fifths wider than long, widest slightly before the middle, the sides parallel and broadly, evenly arcuate to the tip of the moderately advanced, rather blunt and briefly vibrissate apical angles, very feebly sinuate toward base, the angles much produced posteriorly, with their apices blunt, resting within the reflexed humeri; base deeply bisinuate, wider than the apex, which is deeply and broadly sinuate; surface nearly flat, with rather coarse close impressed punctures, a narrow and slightly interrupted median line and a few isolated spots more embossed and smooth, feebly concave and reflexed laterally, with the punctures not coarser but sparse; scutellum small, acute, as wide as long, not sunken; elytra fully three-fourths longer than wide, barely wider than the prothorax, the parallel sides feebly arcuate, the humeri right but rounded, gradually and evenly ogival behind, the surface feebly convex, the three feebly elevated lines of anastomosing glabrous spots very uneven, the external very narrow, the side margins acute and narrowly reflexed, extending nearly to the apex, the suture throughout depressed, flattened and squamulose, a fine sutural margin glabrous but not elevated; depressed areas closely, very finely punctate, the yellow squamiform setæ yery small but distinct; abdomen smooth, extremely minutely and remotely punctulate and with excessively minute slender and depressed pale hairs. Length (8) 13.5 mm.; width 5.7 mm. Mexico (Federal District-San Aug.),—H. F. Wickham.....*abstrusa n. sp.

Form much stouter and decidedly ventricose, dark piceous to blackish in color, subopaque, the elytral lines more shining, especially in the male, where they are strongly but unevenly geminate; head very feebly and broadly impressed transversely, not coarsely but rather closely punctate, each puncture with a small yellowish hair; prothorax but slightly wider than long, the width never more than a third greater than the length, the apex much narrower than the base, moderately sinuate, the angles blunt at tip; sides broadly, subevenly arcuate, gradually sinuate basally, the basal angles strongly, obliquely everted and prominently acute; base broadly bisinuate; surface not very convex, very densely, confluently and rather coarsely punctate, with a feebly defined impunctate line basally, and, on each side of the middle, two smooth and inconstant spots, the posterior oblique, the anterior rounded, the punctures medially coarser toward base; sides narrowly and feebly reflexed, thickened; hairs minute, pale; elytra but little longer than wide, obtuse and moderately declivous behind, the sides arcuate, a fourth (07) to nearly two-fifths (9) wider than the prothorax, very moderately convex, sloping evenly toward the base throughout the width, the three feeble ridges, the two inner of which are unevenly geminate, joined transversely by irregular lines, the depressions with minute and rather stout pale hairs; abdomen smooth, very finely punctate posteriorly and having very sparse and extremely minute thin yellowish hairs. Length (♂,♀) 15.0-17.0 mm.; width 8.2-9.6 mm. Mexico (Promentorio, in the Sierra San Francisco, Durango—altitude 2400 metres).....*evertissima n. sp.

Abstrusa closely resembles suturalis Champ., but appears to be narrower, more parallel and more depressed, having the elytral base not obviously wider than the prothorax—though the original description of suturalis may be drawn from the female. The prothorax, also, is evidently shorter and more transverse, with less rounded sides and the sides of the elytra are less rounded, the surface laterally without any definite transverse wrinkles. On each side of the median line of the pronotum in the type of abstrusa, and just before the middle, there is a small and shallow but distinct rounded indentation, not connected in any way with the small embossed smooth spots; no allusion is made to these indentations in the description of *suturalis*, and it is of course possible that they may be spurious. On the whole abstrusa is, however, so closely related to suturalis that it may prove to be not fully distinct. The fifteen examples of evertissima in my cabinet indicate a species allied to geminata Champ, but agreeing scarcely at all with the figure of that species given on the plate, the prothorax being very much more elongate and relatively larger in both sexes; the elytra, moreover, do not slope obliquely toward the humeri and the pronotum has, besides the oblique smooth spot at each side of the middle, another rounded and more anterior; these spots are rather inconstant in extent. The minute hairs of evertissima could not be termed scaly, although sometimes very coarse. *Intricata*, of Champion, would also without much doubt belong to Notiasida, were it not for the statement that the prosternal process is subhorizontally produced, the mesosternum being somewhat excavated for its reception, which would seem to militate against such an assignment.

Parasida n. gen.

The general form and anatomical features of the body in this genus are nearly as in *Notiasida*, but the elytral structure is quite different, the costæ usually having the form of thin acute and very regular carinæ, becoming lower and more obtuse though still regular in some forms, such as *laticollis* and *planatula*; the outer costa shows no tendency to join the side margin as it does in *Eu*-

schides and subsequent genera of the table. The last joint of the male maxillary palpi is scalene and much larger than in the female, conforming to the *Pelecyphorus* type, the labrum having the usual small deep median sinus at apex, the antennæ moderately developed, slightly enlarged subapically from the base of the ninth joint, the eves very short, almost five times as wide as long, with the anterior margin subsinuate, the mentum small, obtrapezoidal. separated from the sides of the buccal opening, the gular support moderately high and the ligula unusually small though turnid and non-retractile. The prosternum is rapidly convex and deflexed posteriorly, becoming vertical at the hind margin, the legs rather short and slender, the tarsi with short spinules beneath, the anterior tibiæ only minutely everted and acute externally at tip and the trochantin is well developed. The body is moderately large to small in size, generally opaque and with very varied vestiture of short squamules; in bibasalis it is wholly glabrous, except the dense tomentum at the thoracic and elvtral bases. The species are rather numerous and widely diffused from southern Arizona to southern Mexico; those represented in my collection may be described as follows:

3—Form oblong-oval, rather depressed, opaque, piceous-brown in color; head feebly tri-impressed, finely, sparsely punctate and with short stiff yellow hairs; prothorax three-fifths wider than the median length, widest slightly behind the middle, the apex distinctly narrower than the base, deeply, circularly sinuate, the angles acute, not blunt at tip; sides very evenly, moderately arcuate from apex to base, the latter broadly, deeply bisinuate, the angles strongly projecting posteriorly inside of the reflexed elytral humeri and acute; surface rather feebly convex, coarsely, densely but unevenly punctate, with some small vacant patches and a slightly embossed narrow subinterrupted median line, becoming rather gradually and broadly concave and reflexed, and still more coarsely, very densely punctate laterally, the edge rather thick but even, each puncture with a small subdecumbent, very coarse and distinct vellow hair: basal margin thick and truncate vertically toward the middle and clothed very densely with yellow pubescence; elytra scarcely one-half longer than wide, barely a fourth wider than the prothorax, obliquely and gradually subacute in posterior two-fifths, the apical lobe not differentiated, widest at the middle, the sides arcuate though very feebly converging basally; surface of each with three thin carinæ, the first from base for three-fifths, the second from base straight and parallel to the first to beyond three-fifths, then curving inward slightly and thence parallel and straight to apical sixth, the outer beginning abruptly at basal fifth or sixth, parallel to the arcuate side margin to apical fifth, the side margin finely cariniform, slightly reflexed, extending to the end of the second carina, becoming strongly reflexed at the distinct but bluntly rounded humeri, the suture also finely elevated; interspaces flat, densely opaque, sculptureless, each with a single median series of moderate perforate punctures, and, toward the carinæ, clothed rather densely with coarse subdecumbent yellow hairs which are directed obliquely outward; abdomen rather shining, somewhat finely, closely, subasperately punctate. Length (d) 11.0 mm.; width 5.0 mm. Arizona (Huachuca Mts.).

laciniata n. sp.

Form oblong-oval, stouter and much larger, black, opaque, the punctures of the anterior parts and under surface each with a very minute hair, the elytra completely glabrous, except on the basal slope, which is clothed densely with pale hairs, the basal margin of the pronotum also densely clothed with similar hairs, in both cases except at the sides; head moderately impressed, somewhat coarsely, densely punctate basally but feebly and sparsely so anteriorly; antennæ rather short and stout; prothorax one-half to three-fourths wider than long, the apex evidently narrower than the base, deeply sinuate, the angles rather blunt at tip; sides evenly and moderately arcuate throughout, rather more strongly anteriorly, the basal angles acute and posteriorly prolonged within the reflexed humeri; base truncate, deeply sinuate at each side; surface very feebly convex, gradually tumid toward the smooth elevated subcariniform median line and with a large rounded pit, deep to evanescent, at each side of the keel at or just before the middle, the sides gradually rather broadly concave; punctures coarse but very unequal and irregular, very coarse and confluent near the keel, smaller and sparser thence to the sides, with large irregular smooth patches, somewhat transversely rugulose near the edges, which are even though thick, punctate; scutellum small; elytra moderately convex, gradually pointed and moderately declivous behind, a third to slightly more longer than wide, a fourth or less wider than the prothorax, the carinæ thin and strongly elevated, slightly shining, disposed as in laciniata, the intervals smooth, very opaque, with very minute remote punctulation and a more regular series of more distinct punctures near the cariniform sutural edges; humeri strongly reflexed; abdomen closely but not deeply punctate and finely, transversely Length (3, 9) 15.5-18.0 mm.; width 7.3-8.8 mm. Mexico (Promontorio, Durango—elevation 2400 metres).

*bibasalis n. sp.

4—Third elytral carina basally abbreviated as in the preceding species..5

Third elytral carina apparently attaining the base or very nearly.....6 5—Form oblong-elongate, parallel, almost flat above, black, subopaque, densely clothed with pale vellowish-brown squamules, hair-like and less appressed on the anterior parts and very fine and sparser on the under surface; head very broadly and feebly impressed and with a pit at the middle of the vertex, closely, not deeply or very coarsely punctate; antennæ moderate in length, rather stout; prothorax almost three-fourths wider than long, about as wide as the elytra, the apex very much narrower than the base, deeply sinuate, the angles broadly rounded; sides slightly diverging from apex to base and feebly, subevenly arcuate, rounding in at base, the angles produced posteriorly over the humeri but very obtuse and rounded, lobiform; base broadly, rather strongly sinuate laterally, truncate and with slightly more concentrated hairs medially; surface nearly flat, broadly, feebly concave laterally, not coarsely, very densely and confluently punctate throughout, without more than a partial and feeble trace of a smooth median line, with one or two small smooth spots at each side, the lateral edges very even but thick and blunt; scutellum large, transverse, triangular, somewhat concave, closely and strongly punctate, with the median line narrowly cariniform; elytra three-fifths longer than wide, at base scarcely perceptibly wider than the thoracic base, the sides nearly straight and feebly converging from the base for fully twothirds, there more rapidly rounding, the apex gradually pointed and feebly declivous; surface nearly flat, the inner ridge and suture very feeble and broadly obtuse, the others also slight in elevation and obtusely blunt but distinct, the third basally abbreviated as in the preceding, the marginal ridge strong but not much more reflexed basally, all the ridges opaque and but little less closely squamulose; intervals very densely squamose almost throughout but with a line of sparser, more erect and more hair-like and setiform squamules along the middle of each, the sculpture fine and very dense; abdomen smooth, very minutely, feebly and rather sparsely punctulate, more closely so posteriorly; legs slender, with fine and pale close-set hairs. Length (♂) 16.0 mm.; width 7.5 mm. Mexico (La Borrega, Durango).....*planatula n. sp.

Form stouter and much more convex, parallel, deep black, generally with a loose earthy incrustation, the setæ larger but darker in color, becoming pale only along each side of the deep intercostal elytral depressions; head impressed, densely punctate and scabrous, the stiff setæ evident, suberect; prothorax two-thirds wider than long, fully as wide as the elytra, parallel, with very evenly rounded sides from the tips of the feebly produced and broadly blunt apical, to the tips of the moderately prolonged and bluntly acute posterior, angles, the base deeply sinuate at each side, much wider than the apex; surface broadly, feebly convex, coarsely, very densely and confluently punctate, with a narrow partial median line and about two small spots at each side embossed and smooth, gradually rather narrowly explanate but not very differently sculptured along the

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sides, which are rather thick; scutellum similar but more sunken, carinate; elytra three-fifths longer than wide, widest at the middle, parallel, with very broadly, evenly arcuate sides, rapidly evenly ogival posteriorly, the humeri somewhat prominent and nearly right through rounded; surface with three narrow, strongly and abruptly elevated costæ, the sutural and lateral margins also elevated, the first and second costæ coalescent at the middle of the basal margin and also at the summit of the convex declivity, the combined ridge joining the lateral margin nearer the apex, the third costa joining the lateral margin near the base, or tending thereto, its posterior end free; depressed intervals finely, densely rugose and opaque; abdomen with rather strong though sparse punctures. Length (σ) 15.0 mm.; width 6.8 mm. Mexico (Toluca),—H. F. Wickham.

*tolucana n. sp.

6—Body in great part similar in form to *laciniata* but rather stout, black, opaque, very moderately convex and with short flavate pubescence; prothorax one-half wider than long, narrowed anteriorly, the sides rounded, incrassate and reflexed, the apical angles acute; base truncate, the hind angles "nearly right"; surface unequal, densely punctate, narrowly carinate medially; elytra wider than the prothorax, posteriorly declivous and acuminate, the margin extending to the tip; suture and three costæ on each, the inner extending two-thirds and the others three-fourths from the base acutely elevated. Length 15.0 mm. San Diego trip,—(probably from some point on the southern boundary of Arizona). [Euschides liratus Lec.].

lirata Lec

7—Body sparsely pubescent, sordid black; prothorax slightly shorter than wide, rather flat, the sides broadly rounded and narrowly reflexed, with the [posterior] angles acute, not at all densely punctate; elytra elongate-oval, sparsely punctate, the lateral margin serrulate, this as well as two discal costæ on each, the internal of which is entire, the outer abbreviated at each end, acutely elevated. Length 12.5 mm. Lower California (Cape San Lucas). [Pelecyphorus sexcostatus Lec.]......sexcostata Lec.

Lirata and sexcostata are still apparently represented by the original unique examples, the former taken, I believe, by the Mexican Boundary Expedition, being, as figured by Horn (Rev. Ten. — plate), a species much larger and stouter than laciniata and without indication of the basal abbreviation of the outer discal carina so prevalent throughout the genus. The single row of perforate punctures along each of the intercarinal spaces in laciniata, and the dense basal pronotal fringe of pubiform tomentum are remarkable characters in that species, the latter still more developed in the Mexican bibasalis, and, if they were at all obvious in lirata, would undoubtedly have been alluded to by LeConte. There is

seemingly but little doubt that *sexcostata* is properly a member of this genus, although no mention of an inner elytral carina is made by either LeConte or Horn; but, in the figure given by the latter author (l. c.), there is a distinct indication of this carina in a vestigial stage depicted by the artist.

Besides the species described in the above table, the genus Parasida will include the Mexican Asida scutellaris, fallax, laticollis, favosa, similata and possibly dissimilis, all of Champion, some of which were subsequently reduced to the status of subspecies by their author, though probably too hastily in most instances. Planatula differs from laticollis in its depressed and nearly flat upper surface, in the rounded or lobiform hind angles of the prothorax, in the deep lateral sinuses of the base, in the low and obtuse elytral ridges and scarcely elevated suture. Tolucana is allied rather closely to *scutellaris* but differs in having the sides of the prothorax not sinuate but rounded basally and in its deeply, rather coarsely and closely punctate intercarinal surfaces of the elytra, with an occasional large deep puncture or irregular tubercle; the brown squamæ are only present in a narrow line adjoining each costa, the median part of each interval being broadly subglabrous. Parasida is one of the larger and more characteristic of the Mexican genera.

Euschides Lec.

The genus Euschides is by far the largest minor division of the Asidini inhabiting North America and its species exhibit great diversity of outline and sculpture. They are bound together, however, by certain peculiarities of structure, as stated in the table, differing from Pelecyphorus and allied genera in the thick tumescent, angularly incised and non-retractile ligula, and, from the subsequent genera of the table, all of which possess this feature, they differ in the large scalene terminal joint of the male palpi, more particularly distinguishing the Pelecyphorid genera. The form of the thoracic base is so singularly constant throughout all this incongruity of form and bodily facies, that it leads me to consider the formation of the bases of the prothorax and elytra as having a great deal of importance taxonomically; the base is broadly, subarcuately lobed, somewhat as in the third group of Pelecyphorus and a few other genera and less distinctly in Gonasida; the basal angles are always

very obtuse but in some species are rendered more evident by reason of a small feeble basal sinus adjoining. The mentum varies somewhat in size, being generally though not always smaller than in Pelecyphorus and allies; it is always seated upon a pronounced gular pedestal, is more or less obtrapezoidal and with the usual small median sinus at apex. The eyes are more or less feebly sinuate anteriorly below the middle. The antennæ are nearly of the *Pelecyphorus* type but generally more gradually and feebly enlarged through the two or three penultimate joints. The prosternum is but seldom longitudinally impressed and descends more rapidly upon the anterior margin of the mesosternum, the legs varying in length and thickness, the tarsi moderate, generally narrowly grooved and always having very short erect stiff hairs or spinules beneath, the anterior tibiæ strongly everted and acute or spiniform externally at apex. The body is never very small and is always glabrous or virtually so, except in the puncticollis group.

The very numerous species and subspecies may be assigned to the following seven clearly delimitable groups:

the following seven clearly definitiable groups.
Elytra with an acute marginal carina, or at least a well-marked subacute ridge, through a more or less considerable part of their length; mentum moderate, leaving a rather wide vacant space between its sides and those of the buccal opening; body glabrous, except in the puncticollis group
generally a very short one at the humeri; mentum generally similar, though sometimes larger as in <i>crassus</i> ; body completely glabrous throughout
2—Body wholly glabrous
Body with short, sparse and erect hairs, sometimes longer and very
distinct on the elvtra5
3—Pronotum with a distinct impression at the middle of the base, involving the basal margin; upper surface of the body very moderately convex to nearly flat, the size always large
Pronotum without the narrow impression but frequently having a feeble
transverse impression parallel with the margin and separated there-
from by a slight transverse tumidity; upper surface much more
convex, the size never so large4
4—Elytra smooth, or each with three broad and feebly tumid discal
ridges, generally feebly sculptured; sides of the prothorax generally
rounded but occasionally angulate at the middle. [Stenomorpha
Sol. (pars)]Group II
Elytra with two distinct and strongly elevated discal costæ on each and
occasionally a third, which latter tends to join the side margin

- 5—Pronotum coarsely and densely punctate, sometimes medially impressed at base as in Group I, deplanate or concave and reflexed at the sides; elytra with vestiges of three fine costules on each, the outer of which joins the margin near the base; side margin obsolescent, sometimes rather acute and distinct but not cariniform and reflexed, except near the humeri; body very convex...... Group IV
- 6—Elytra widest at or before the middle, more gradually acuminate behind than in any other group, the prothorax rounded or angulate at the sides; body always deep black throughout, very convex; general form of the body strikingly imitative of *Eleodes...* Group V

7—Sides of the very convex prothorax not explanate or reflexed but having a fine cariniform margin; eyes larger than in any other group and less transverse than elsewhere in the tribe so far as observed.

Group VI

These groups are not quite so strongly differentiated as those of *Pelecyphorus*, but, at the same time, are to be considered subgeneric in nature, as the facies is quite distinctive in each and a species can be placed in its proper group without a moment's hesitation.

Group I—Type marginatus Lec.

The species of this group are the largest of the genus and are confined to the arid regions of Arizona and western New Mexico, particularly to the southward, where they are numerous and greatly diversified in form and sculpture.

Pronotum similarly coarsely and closely rugose at the sides but sensibly reflexed.

4-Body blackish, alutaceous, the elytra dark rufo-piceous; head deeply,

transversely impressed, coarsely, deeply, rather closely punctate, a transverse region between the eyes nearly free from punctures; antennæ stout, nearly as long as the prothorax, notably compressed distally; prothorax large, nearly one-half wider than long, broadly, evenly convex and with small sparse punctures except abruptly at the sides, the basal impression moderate, concave; elytra twice as long as wide, scarcely at all wider than the prothorax, feebly and almost evenly arcuate at the sides, broadly and moderately convex, widest at or slightly behind the middle, the apex obtusely and briefly lobed from above; surface with fine and feeble creases and with rather small, sparse and notably feeble punctures, the side margin from about the middle narrowly reflexed basally; abdomen shining, deep black, not punctate, except moderately toward the tip but everywhere with fine anastomosing creases; legs long, rather slender, the tarsi thick, moderately short. Length (3) 30.0 mm.; width 12.3 mm. Arizona.....pollens n. sp.

A—Similar to the preceding throughout in coloration, lustre and sculpture but notably more abbreviated, with the pronotal impression subobsolete, the elytra about one-half longer than wide, more inflated behind and nearly one-half wider than the prothorax, the acute side margin not extending to the middle, the abdomen with the apical punctures finer and sparser, the legs rather shorter, notably more sparsely sculptured and with the tarsi relatively longer and more slender in both sexes, the antennæ much more slender. Length (♂, ♀) 24.0-27.0 mm.; width 12.3-12.8 mm. Arizona......proximus n. subsp.

Body similar but black throughout, alutaceous, the pronotal punctures still sparser, the elytra (♀) rather more convex, less inflated, more evenly oval, widest at the middle, two-thirds longer than wide, two-fifths wider than the prothorax, the sparse punctures similarly indefinitely impressed and very feeble, the side margins still shorter, extending but little beyond basal third; pronotal impression distinct as in *pollens*; abdomen as in *proximus*, the legs as in *pollens*, except that the tarsi are evidently a little longer and more slender. Length (♀) 27.0 mm.; width 11.7–12.8 mm. Arizona.

brevimargo n. sp.

5—Form more slender, with relatively smaller prothorax than in any of the preceding, rather shining or feebly alutaceous, piceous-black, the elytra piceo-rufous, the under surface and abdomen shining, black; head less deeply impressed, less coarsely and more sparsely punctate; prothorax similar in general form but with the parallel sides evenly, though much less strongly, arcuate, the deeply sinuate apex broader, less markedly narrower than the base, similarly finely, sparsely punctate and broadly, evenly convex, but with the basal impression broader, more feeble and diffuse, transverse and bordering, not involving, the margin, somewhat as in the next group though differing in being at the bottom of a basal declivity and not on the same plane as the surface anterior thereto; surface also with a very vague and feeble impression near each lateral fourth just

behind the middle; elytra fully three-fourths longer than wide, nearly one-half wider than the prothorax, gradually broadening and widest at apical two-fifths, the apex more abruptly, obtusely lobiform from above; surface similarly even, feebly creased, with small, very feebly impressed, rather indefinite and still more remote punctures, the acute lateral margin extending slightly behind the middle; abdomen as in *proximus*; legs moderate, the tarsi rather more slender than usual. Length (\bigcirc) 24.0–26.0 mm.; width 11.4–12.0 mm. Arizona (Nogales).....rusticus n. sp.

6-Elytral punctures extremely minute and sparse, obsolescent and even smaller than the pronotal punctures. Body oblong, rather convex, alutaceous, deep black throughout; head transversely impressed, coarsely, deeply and closely punctate; antennæ rather slender but increasing rapidly in width and strongly compressed distally (9), stouter and less incrassate distally (6); prothorax about two-fifths wider than long, the sides rounded and parallel, the general form as usual, the surface broadly convex, very finely. sparsely punctate, moderately reflexed and coarsely, transversely rugose at the sides, the basal impression small and feeble; elytra about two-fifths wider than the prothorax in both sexes, there being very little sexual difference in the body throughout, a very little shorter in the male, two-thirds to three-fourths longer than wide, broadly, evenly convex, sometimes with the sutural regions impressed posteriorly, without trace of costæ or rugæ but with fine irregular creases, the acute lateral margin extending to apical fourth, narrowly but strongly reflexed; abdomen with minute, remote punctures. becoming coarser and closer posteriorly; legs and tarsi rather long and slender, a little longer in the male. Length $(\mathcal{O}^1, \mathcal{O}^1)$ 22.0-25.0 mm.; width 10.6-11.7 mm. Arizona (San Bernardino Ranch, Cochise Co.),—F. H. Snow.....sponsor n. sp.

7—Side margins of the pronotum deplanate, not reflexed, coarsely and sparsely punctate, only the extreme edges confluently punctate, becoming rugulose posteriorly. Form elongate, very moderately convex, alutaceous, black throughout, the elytra dark piceous; head not coarsely but strongly, sparsely punctate, with unusually long blackish setæ, the punctures wanting in a large median area between the eyes; antennæ well developed, rather stout; prothorax two-fifths wider than long, parallel, the sides broadly arcuate; surface broadly, evenly and rather strongly convex, minutely, sparsely punctate, the side margins relatively rather narrow; basal impression well developed; elytra two-fifths wider than the prothorax, fully three-fourths longer than wide, widest at apical two-fifths, the sides thence feebly converging and but feebly arcuate to the base, rapidly rounding behind, the apical lobe feebly differentiated; surface slightly convex, having stronger sparse punctures intermingled with numerous smaller and irregular ones, also with three extremely vestigial and indefinite costuliform lines on each, the side margin extending to apical fourth and moderately reflexed; abdomen and legs nearly as in the preceding, the tarsi unusually long and moderately thick. Length (♂) 24.0 mm.; width 10.5 mm. Arizona (Huachuca Mts.),

implicans n. sp.

A—Elongate-obovate, very moderately convex, deep black throughout, slightly shining; head coarsely and rather closely punctate; antennæ (σ) long and thick, rather longer than the prothorax, with joints nine and ten punctured throughout; prothorax fully one-half wider than long, the sides parallel, strongly, evenly arcuate, very finely and feebly crenulate, the surface broadly and distinctly convex, finely but distinctly, sparsely punctate, the side margins deplanate, not reflexed; basal pit moderate, broadly impressed; elytra three-fourths longer than wide, widest at two-fifths from the tip, the sides feebly converging thence basally and but very slightly arcuate, rounded behind, the apical lobe broad and moderately distinct; surface simply with sparse and very distinct punctures, even, except that a distinct carinule diverges from the acute margin at basal fourth, becoming gradually obsolete on the declivity, the lateral margin ending abruptly at apical fifth; abdomen minutely, sparsely punctulate, distinctly and more closely punctate apically; legs long, the tarsi long and rather stout. Length $(0^7, 9)$ 24.0-25.7 mm.; width 10.2-11.8 mm. specimens, without indication of locality.....duplicans n. subsp.

B—Rather shining, similar in its very feeble convexity throughout but relatively narrower and more elongate, black above and beneath, the elytra dark rufo-piceous; head similarly coarsely, rather sparsely punctate but somewhat more sharply impressed transversely, the vertex also more impressed medially; antennæ longer than the prothorax, the latter relatively much smaller than in the preceding and about a fifth wider than long, the transversely rugose reflexed side margins narrower, the sides much less and feebly arcuate; surface with the sparse punctures much less small than in the preceding, rather large for this section, somewhat indefinitely and moderately impressed; elytra about twice as long as wide, a third wider than the prothorax, widest but little behind the middle, the large apical lobe as in duplicans, the surface with

sparse punctures, which are a third as wide as the length of the scutellum, very large for this section but very feebly impressed and somewhat ill-defined, without carinules except the one very near the margin joining the latter near basal fourth, which is however much feebler and more disintegrated than in duplicans; abdomen nearly similar; tarsi long. Length (\circlearrowleft) 25.0 mm.; width 10.5 mm. California (Yuma, San Diego Co.).

esuriens n. subsp.

Form nearly as in *duplicans* (Q) but notably more convex and rather strongly shining, black, the elytra rufo-piceous; head similarly coarsely, loosely punctate; antennæ nearly similar; prothorax similar in size and outline but not evenly, moderately convex transversely as in *duplicans* but, on posterior profile view, more strongly and parabolically convex, the small sparse punctures a little larger and the extremely minute punctulation of the interspaces more evident; side margins broader and deplanate; basal impression narrower and deeper; elytra (Q) not quite one-half wider than the prothorax, less elongate, much more convex, more oval or with more rounded sides than in the two preceding and with the apical lobe narrower, more prominent and more abruptly formed; surface even throughout, more declivous at the sides, without trace of the submarginal carinule, the lateral margin similar; legs long and slender. Length (Q) 26.0 mm.; width 12.0 mm. Arizona (Nogales)...procurrens n. sp.

Form much more strongly obovate, the head and prothorax relatively less developed, deep black throughout and shining; head with the usual strong separated punctures; prothorax scarcely more than a third wider than long, evenly convex transversely, finely, sparsely, often evanescently punctate; sides not broadly but strongly reflexed, the basal impression very feeble and transversely diffuse; elytra two-thirds longer than wide, widest well behind the middle, the sides rather strongly converging and broadly rounded thence to the base, obtuse posteriorly, with the apical lobe rather abrupt and moderate; surface convex laterally, rather flattened or impressed suturally, smooth, with a few coarse creases, the punctures sparse, rather strong, each with two fine and vestigial costules and another along and close to the suture, which is flexed outwardly basally joining the first costule at the basal margin; first and second costules, the latter almost obsolete, joining each other posteriorly; lateral margins fine but strong, ending abruptly near apical fourth; abdomen and legs as usual, the tarsi rather more slender. Length (♀) 23.7-27.0 mm.; width 11.2-12.6 mm. Arizona (Huachuca Mts.)

caliginosus n. sp.

Form very stout and ventricose, somewhat as in the preceding but much more abbreviated, deep black throughout and shining; head broadly and moderately impressed transversely, deeply, rather coarsely and sparsely punctate; antennæ long and well developed, stout as usual; prothorax transverse, nearly one-half wider than long, the subparallel sides evenly, rather strongly arcuate; apex much narrower than the base and deeply, circularly sinuate, the angles rather blunt; surface

much more convex than in the preceding, distinctly alutaceous, sparsely, very finely punctate, rather abruptly but not very widely deplanate and transversely rugose at the sides, the plane just visibly inclined upward, the edge moderately thick and uneven; elytra two-fifths longer than wide, three-fifths or more wider than the prothorax, widest at three-fifths, the sides arcuate throughout, rapidly rounding in posteriorly, the apical lobe relatively rather small; surface very even throughout, without trace of costuliform lines, more strongly convex and more steeply declivous at the sides posteriorly than in caliginosus and quite evidently impressed along the suture except basally and apically, very strongly shining, only very finely and sparsely creased, the punctures small, very sparse though rather deep and distinctly defined; lateral reflexed carina ending abruptly at apical fifth; abdomen polished, very minutely, remotely punctulate; legs slender; tarsi short. Length (♀) 23.0 mm.; width 12.2 mm. Arizona (Baboquiyari Mts.).

satiatus n. sp.

10—Form moderately stout, decidedly convex, black, the entire elytra dark red-brown; head impressed, strongly but sparsely punctate; prothorax large, a third to two-fifths wider than long, three-fourths (σ) to threefifths (Q) as wide as the elytra, parallel and very moderately arcuate at the sides, shining, subalutaceous, strongly convex, minutely and sparsely punctate, the sides reflexed and coarsely, transversely rugose; basal impression rather transverse, well marked; elytra twothirds longer than wide, more oval and rounded at the sides in the female, widest behind the middle, the apical lobe short but evident. obtuse; surface strongly, evenly convex transversely, closely rugose and not or but feebly shining, each with three low obtuse discal costæ, the outer joining the margin at basal fourth or fifth, the first and second approximate at base, uniting on the declivity, the single feeble line then joined by the third ridge; sutural margin also subsimilarly elevated, nearly smooth, diverging from the suture basally and joining the first costa at the basal margin; intervals elevated, more or less along their median lines, sometimes forming broader and feebler costæ; side margin ending at apical fifth; abdomen finely, sparsely punctate and also with extremely minute, close-set punctulation; legs moderate, the tarsi shorter in the female as usual. Length $(\emptyset^1, \mathcal{P})$ 23.0-24.0 mm.; width 11.0 mm. Arizona (Peach Springs),—H. F. Wickham.....rugatus n. sp.

II—Elytra very roughly, coarsely and densely punctato-rugose. Moderately ventricose and flattened above, dark piceous-brown throughout; head rather feebly impressed, coarsely, deeply, rather closely punctate; prothorax dull in lustre, two-thirds as wide as the elytra in both sexes, two-fifths wider than long, broadly and moderately convex, coarsely, deeply, closely but unevenly punctate, with a very feeble and obsolete impression at each lateral fourth just behind the middle, the basal impression deep and distinct; sides parallel, moderately arcuate and reflexed, coarsely, transversely rugose, the edges finely, irregularly crenulate; elytra faintly shining, widest

- 12—Elytra much depressed, nearly flat. Black, prothorax twice as wide as long [!], slightly convex, [moderately coarsely], sparsely punctate, the sides [distinctly] rounded and confluently rugose, broadly depressed; posterior angles obtuse, not at all rounded; elytra ovate, slightly wider than the prothorax, declivous behind, the surface coarsely punctate and subrugose, without faint costuliform lines, the sides acutely margined; epipleura sparsely, obsoletely punctate. Length 25.0 mm. Camp 7, Mexican Boundary Commission. [Pelecyphorus rimatus Lec.]..........rimatus Lec.
 - A—Smaller, shining, black, the elytra dark piceo-rufous; head deeply, transversely concave, coarsely, densely punctate, a transverse impunctate area between the eyes; prothorax four-fifths as wide as the elytra, two-fifths wider than long, a little more narrowed apically than basally, the sides evenly, rather strongly rounded: surface moderately coarsely, rather closely but irregularly punctate, convex, with a small feeble impression just behind the middle and another oblique near the base at each side near lateral fourth; margins reflexed, coarsely, transversely rugose, the basal impression distinct; elytra oblong, nearly parallel, with feebly arcuate sides, the apical lobe rather large, abrupt; surface nearly flat, even, except a faint cariniform line near the sides joining the margin near basal fifth, the very coarse punctures everywhere well separated; side margins acute, ending abruptly near apical sixth; under surface shining, the legs moderately long. Length (3) 21.7 mm.; width 10.5 mm. Arizona (locality unrecorded).

subplanatus n. subsp.

 14—Form (o) elongate-pyriform, very moderately convex, piceousblack, the elytra dark to bright rufous; head moderately impressed, rather coarsely, deeply, irregularly punctate and with irregular impunctate patches; prothorax relatively small, two-fifths wider than long, two-thirds as wide as the elytra, almost as strongly narrowed basally as apically, the sides strongly arcuate, surface alutaceous, with moderately coarse, irregularly somewhat close, deep punctures and with a rather elongate feeble impression at each side at lateral fourth behind the middle, causing the median convexity to be strongest between them, the sides feebly reflexed, transversely rugose, the basal impression strong; elytra two-thirds to threefourths longer than wide, even, seldom with traces of raised lines, coarsely but not very deeply punctate, the punctures generally well separated but more or less confluent laterally, widest behind the middle, the sides basally converging and broadly arcuate, the margins moderately to feebly reflexed, ending at apical fifth or sixth; under surface shining and darker as a rule, the legs rather stouter than usual and only moderate in length. Length 24.0-26.0 mm.; width 11.5-11.8 mm. New Mexico (locality and collector unrecorded).

subcruentus n. sp.

Form (\$\sigma\$) more oblong and parallel, more convex, shining throughout, blackish-piceous, the elytra bright red; head nearly similar; prothorax very much larger, nearly as wide as the elytra, one-half wider than long, more broadly and less strongly convex, the rather coarse punctures very irregularly disposed, sometimes leaving large vacant areas, having a small rounded feeble impression at each side rather beyond lateral fourth and slightly behind the middle; sides evenly, moderately arcuate, rather strongly reflexed, densely, transversely vermiculato-rugose, the basal impression distinct and on the basal declivity as usual; elytra suboval, three-fourths longer than wide, evenly convex, but faintly inflated posteriorly, the sides broadly arcuate; surface nearly as in the preceding but with the punctures deeper, the side margins nearly similar; legs moderate, somewhat more slender. Length 24.0 mm.; width 11.0 mm. Arizona (locality unknown).....semirufus n. sp.

Form (\$\sigma\$) unusually narrow, elongate and less convex, alutaceous, deep black throughout above and beneath; head deeply impressed, the transverse impression interrupted medially and with the impression at the middle of the vertex also distinct, the punctures moderately

strong, not dense; antennæ as long as the prothorax, the latter relatively large, fully four-fifths as wide as the elytra, barely a third wider than long, the deeply sinuate apex much narrower than the base; surface broadly, evenly convex, with rather small and feeble, sparse, very irregularly distributed punctures and an irregular feeble impression at each side near basal third and outer fifth; sides moderately and evenly arcuate, unusually narrowly reflexed, very deeply, transversely rugose, the basal impression moderate, transverse; elytra widest near apical third, the sides thence feebly converging and perfectly straight to the rectangular though blunt humeri just behind the thoracic angles, the sides apically rapidly rounding, the lobe moderate, rather short; surface with very indistinct vestiges of the usual three fine costules and with coarse, irregular and rather shallow punctures, usually clearly separated by the strongly alutaceous interspaces; side margins unusually high and thin, ending abruptly at apical fifth or sixth; under surface more shining, the legs long and slender. Length 23.0 mm.; width 10.0 mm. Arizona (Huachuca Mts.)......directa n. sp.

Prothorax nearly as in *rimatus*; elytra elongate, strongly rounded on the sides, subcylindrical and with a very short humeral carina; surface smooth, very finely punctate. Desert regions bordering the Gila River, Arizona.....subcylindricus Horn

The few characters given above to define subcylindricus are all that have been published and are insufficent to enable me to place it very exactly, the name would imply a greater degree of convexity than in any form known to me and the very short humeral carina would appear to be as in the obovatus group, but the published figure shows a prothorax unusually large even for the present group, being about as wide as the elytra and wholly unlike obovatus; it is evidently a distinct species and not a variety of marginatus as originally published. A species described in few words by LeConte. in the remarks after his diagnosis of Pelecyphorus sordidus (Proc. Acad. Phil., VI, p. 445), under the name P. subcostatus, has obovate elytra, dilated gradually for three-fourths of their length, somewhat flattened anteriorly, very declivous and subacute posteriorly, truncate at base, the acute lateral margin extending to about apical fifth, the surface sparsely punctured, each elytron marked with three faint elevated ridges, obsolete at both ends and of which the external is most distinct; under surface and legs as in sordidus. This is evidently allied closely to the species above described under the name caliginosus, only there it is the inner of the faint costuliform lines which is most distinct, the outer being as nearly as possible obsolete; *subcostatus* was defined wholly from the hind body, as the anterior parts were missing in the original type, which was found by the Mexican Boundary Commission.

In rusticus of the above table, the small sparse elytral punctures have just a suspicion of lineal arrangement on some parts of the surface. In one example of brevimargo there occurs a singular deformity, the right hind leg being but slightly longer than the intermediate, while the left hind leg is very much longer as is normally the case throughout the genus. To the left of the middle of the hind margin of the fourth ventral in the type of subcruentus, there is a fine porrect tooth projecting from the margin and bristling with erect setæ. The hind coxæ in this type are unusually narrowly separated, scarcely more than half as widely as the middle coxæ, while in the second specimen, which is also a male and having less elongate, rather less convex and less strongly margined elytra, the hind coxæ are notably more widely separated, only a very little less so than the intermediate; this is one of the most pronounced structural inconsistencies that I have observed, and, if constant, would imply two remarkably distinct species in spite of the general similarity of facies of the only two specimens now at hand.

Group II—Type blapsoides Sol.

This group is more properly Mexican and in those regions abounds in species and subspecies; it is however represented in this country by several aberrant species, forming two distinct sections, the first of which as arranged below by its general appearance and, especially, its coarsely and transversely rugose pronotal sides, recalls the *marginatus* group very forcibly; it is however well distinguished by the very convex and more cylindrical elytra.

 base and unusually feebly sinuate, the angles but little produced and obtusely rounded; sides parallel, obtusely angulate and slightly rounded distinctly behind the middle, thence about equally converging and straight to apex and base; surface broadly, very moderately convex, rather finely and sparsely but deeply and perforately punctate and with very minute punctules scattered over the interspaces, very feebly, transversely impressed along the base, the basal margin slightly tumid behind the impression; sides rather narrowly and deeply concave, strongly reflexed and deeply, transversely rugose; elytra three-fourths longer than wide, parallel, with broadly and evenly arcuate sides, widest at the middle, the humeri obtuse though scarcely blunt, the apical lobe broad, obtuse and indistinct; surface cylindrically and strongly convex, scarcely more shining, minutely, rather sparsely punctate, finely, transversely creased and each with several longitudinal broadly and feebly concave impressed lines, separated by feeble broad convexities, the subsutural line rather more acutely impressed and evident; side margin acute but not extending much behind the middle, becoming gradually strongly reflexed at the humeri; abdomen shining, minutely, sparsely punctulate; legs and tarsi moderately long and slender. Length (8) 22.0 mm.; width 9.0 mm. Colorado,—Schaupp.....advena n. sp.

3—Form stout, somewhat oboval, convex, alutaceous above, strongly shining beneath, black or piceous-black, the elytra sometimes nubilously rufescent suturally and basally; head deeply, transversely impressed, rather coarsely, deeply and closely punctate before, more sparsely and less coarsely behind, the impression; antennæ well developed, rather longer than the prothorax (σ^1) ; prothorax large, parallel, two-fifths wider than long, three-fourths as wide as the elytra, strongly, evenly rounded at the sides, the apex distinctly narrower than the base, moderately and evenly sinuate, the angles but slightly advanced though acute; surface rather strongly, evenly convex, sometimes with the median line very obsoletely impressed centrally, a transverse and feeble, sometimes medially interrupted impression along the median part of the basal margin and another at each side near basal and lateral fourth, frequently becoming obsolete, the punctures very small but deep, very sparse, the interspaces with some very minute punctules; sides abruptly, deeply concave, strongly reflexed, coarsely punctate to transversely rugose; elytra one-half to three-fifths longer than wide, oblong-oval, with arcuate sides, obtuse posteriorly, the lobe rapidly acuminate; surface convex, becoming vertical at the sides, feebly alutaceous, very minutely, remotely punctate, with short deep subtransverse creases and with longitudinal broadly and feebly impressed furrows separated by broad and feeble convex lines, the sutural region rather depressed; side margin acute, obsolete in nearly apical half, narrowly explanate, becoming finely reflexed basally; abdomen shining, smooth, except the very minute anastomosing creases; legs moderately long, slender. Length $(\mathcal{O}, \mathcal{P})$ 19.0–22.0 mm.; width 9.6–11.5 mm. Arizona (Ash Fork),—F. H. Snow......corrugans n. sp. Form narrower, deep black throughout; head much less deeply impressed but with coarser, deep and close-set punctures throughout; antennæ distinctly shorter (3): prothorax much shorter, fully three-fourths wider than long, five-sixths as wide as the elytra, otherwise similar, except that the apex is but little narrower than the base, the surface opaque, with the sparse punctures notably less fine, becoming in fact quite large on the lateral slopes, with the minute punctules less distinct and more remote and without impressions, except the similar very small feeble one on the median line basally; elytra threefourths longer than wide, similar, except that the strongly convex surface is very highly polished, the sutural region undepressed and the side margin defined by a broad shallow groove adjoining it above as far as apical fifth, but becoming acute and narrowly reflexed only in about basal three-fifths; punctures similarly extremely minute and sparse; legs slender, slightly shorter; abdomen much more evidently and closely punctulate throughout, the punctures as usual becoming strong posteriorly. Length (3) 18.3 mm.; width 9.2 mm. New Mexico (Magdalena),—F. H. Snow.....severus n. sp.

Severus differs from corrugans in having the head much more coarsely, closely and uniformly punctate, in the shorter, more opaque prothorax, more defined posterior side margins and much more highly polished surface of the elytra and in the narrower form of the body. These species both differ from blapsoides, more especially, in the strongly punctured head, deeply grooved and strongly reflexed side margins of the prothorax, in having concave longitudinal lines separated by corresponding convex ridges on the elytra, as well as by the more pronounced side margins of the latter. There are a considerable number of Mexican species besides blapsoides, and they occur as far to the southward as southern Mexico; two of them were indicated but not described by Mr. Champion in one of the appendices of the "Biologia."

Group III—Type costipennis Lec.

A limited number of comparatively small and slender species, with rather thicker and denser integuments than the preceding, strongly costate elytra, as a rule, and inhabiting a distinctly different zoological region, confined to southern California and the adjacent parts of Arizona, alone constitute this very distinct group, which however, in its degradational forms, may readily be conceived, to lead onward to the *obovatus* series through the *angulatus* group. Elytra with broad and feeble convex ridges separated by very feeble undefined depressions, the suture not elevated. Body moderately

slender, convex, deep black, opaque throughout, the abdomen shining; head feebly impressed, coarsely punctate, densely so anteriorly, sparsely posteriorly, the interspaces with fine scattered punctures: antennæ much shorter than the prothorax, slender; prothorax about one-half wider than long, widest at the middle, three-fourths as wide as the elytra, the sides strongly, evenly rounded, the apex very moderately sinuate, with slightly advanced but rather blunt angles, barely narrower than the base, the latter oblique and broadly. feebly sinuate to the obtuse angles at the sides; surface opaque. moderately convex, with moderately large deep and very dense subasperate punctures, the sides narrowly concavo-explanate, more coarsely and densely punctato-rugose, the edges moderately thick; elytra fully three-fourths longer than wide, evenly oval, with rather strongly arcuate sides, gradually declivous and narrowed behind, the apical lobe large but not strongly defined; basal margin with a small prominent lateral tooth; surface densely opaque and with fine and rather shallow, muricate, very close-set punctures, the side margin acute and distinctly cariniform, though but little elevated, to apical fifth; abdomen with small but coarse and deep anastomosing creases, finely, not densely punctate, more strongly punctate posteriorly; legs rather short, the femora bristling with short sparse fulvous setæ. Length (♀) 17.0 mm.; width 7.5 mm. California (Kern Co.). spurcans n. sp.

Lateral edges of the prothorax thick and upturned; form more ventricose; elytral punctures closer and more granulose. Form somewhat stout (\$\partial \), convex, deep black; head opaque, deeply, transversely impressed, with a rectilinear impression also along the median line and ending between the eyes, the punctures strong but not very coarse or close; prothorax two-fifths or more wider than long, relatively small, barely two-thirds as wide as the elytra, the apex narrower than the base, moderately sinuate, with the angles rather blunt, the sides evenly rounding and subparallel from apex to base, widest at the middle; surface even, broadly and moderately convex, feebly bi-impressed medially at base, strongly alutaceous, strongly, closely punctate, rather abruptly and not widely concave, reflexed and more coarsely,

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subrugosely punctate at the sides, the edges unusually thick for the present group; elytra but little wider behind the middle, ovoidal, the sides broadly arcuate, rapidly rounding behind, the apical lobe from above well defined and strong; base very minutely denticulate at the sides, sinuate as usual; surface with the second costa but little more distant from the side margin than from the first costa and with but faint vestiges of a short intermediate costa posteriorly; concave intervals decidedly shining and very evidently, though finely, sparsely and submuricately punctate, also transversely creased; side margin acutely cariniform, obsoletely uniting with the single obsolescent prolongation of the united first and second costæ far down the very steep declivity, and thence proceeding obsoletely to the apical angles; abdomen shining, with very deep anastomosing creases, punctate apically; legs short. Length (Q) 16.8 mm.; width 7.4 mm. California (Kern Co.).....evanescens n. sp.

Form (\$\sigma^{\gamma}\$) shorter and notably broader, deep black, highly polished; head strongly, transversely impressed, very slightly alutaceous, having a loose mixture of moderately large and very fine punctures; antennæ nearly as long as the prothorax, with the short stiff setæ dark fulvous in color; prothorax large, one-half wider than long, equal in width to the elytra, subparallel and strongly rounded at the sides, strongly convex, nearly even, with a feeble transverse basal impression medially, narrowly explanate laterally, the surface polished, with not very close-set punctures, which are deep and moderately small mingled with still much smaller ones, becoming coarser but not closer and with the surface alutaceous near the sides; median impunctate line narrow but evident; elytra twice as long as wide, but little broader behind the middle, the sides just visibly converging and feebly arcuate thence to the dentiform sides of the base, the apex from above with a relatively very large and feebly demarcated parabolic lobe; surface polished throughout, feebly, subrugosely creased transversely, extremely minutely, sparsely punctulate, the suture and two costæ on each feebly elevated, the three broadly concave intervals equal, the third without trace of intermediate ridge, the side margin elevated and costiform but obtuse and blunt, becoming coarsely subcrenulate basally; prosternum and propleura with deep and sparse perforate punctures, the abdomen alutaceous, finely, unevenly creased, very finely punctate and extremely minutely, closely punctulate; legs rather long, the tarsi well developed. Length (d) 17.0 mm.; width 6.6 mm. California,—Morrison.

neutralis n. sp.

The name costipennis is preoccupied in Pelecyphorus, by LeConte

himself, and Dr. Horn, who transferred both species to Asida, therefore changed the later one, which belongs to the present group, to lecontei; but the name is not preoccupied in Euschides, a genus which can never be legitimately united with *Pelecyphorus*, and still less appropriately with Asida or Glyptasida, to which latter genus the original costipennis is here assigned; so I have restored LeConte's name, believing that the aphorism "once a synonym, always a synonym" is unreasonable and consequently untenable. It is stated by Horn under lecontei (Rev. Ten., p. 286), that some stout females have a third discal costa, but his figure, which is evidently drawn from a male, has the costa very prominently displayed, and, moreover, the description of costipennis by LeConte, which is evidently based upon the male, alludes to the third ridge as one of its most conspicuous distinguishing features. The published size of costipennis is apparently greater than that of any of the somewhat incongruous examples in my cabinet. The description of costipennis in the table in taken from the original by LeConte, with a few additions inferable from the Hornian figure alluded to. Compressus, of Horn, was not really described, the only written words being that "the thorax and elvtra are much more smooth [than in costipennis and the costa of the elytra represented by very faint longitudinal ridges," but, as a figure is given of the male which may be assumed to be passably accurate, I have derived most of the characters of the above description from this figure. As the lustre of the upper surface is not mentioned by Dr. Horn, it is assumed to be subopaque as in costipennis, otherwise so striking a character as appears in the polished surface of neutralis would in all probability have been mentioned. The male of neutralis differs however very strikingly in its shorter and broader outline from that of the male *compressus*, as portrayed on the plate.

Group IV—Type puncticollis Lec.

This group is more northern than any other, inhabiting the regions from the Columbia River Valley to northwestern Utah. So far as known at present it is composed of but few rare species, of very distinct habitus and distinguished from any others of the genus by having visible pubescence, very short generally and perhaps only distinct on the posterior parts of the elytra, but sometimes becoming

quite conspicuous. They are of stout and very convex, subcylindric form of body, and, in nearly all, the elytra have each three fine feeble and vestigial costules, the outer joining the side margin, as is the rule throughout this genus wherever these costules appear and in accordance with most of the subsequent genera of the tribe here considered.

2—Sides of the pronotum concave and reflexed; pubescence of the elytra conspicuous posteriorly. Body elongate-oval, very convex and subcylindric, slightly shining and blackish-piceous throughout; head unimpressed, nearly flat, very densely and rather coarsely punctate throughout, the erect hairs rather short; antennæ short (2), rather compressed; prothorax short and transverse, about four-fifths wider than long, the subparallel sides evenly and rather strongly arcuate; apex much narrower than the base, deeply sinuate, the angles acute or slightly blunt at tip; basal angles moderately obtuse, very distinct by reason of the small but rather deep sinuses of the base adjoining them as in some of the *obovatus* group; surface strongly and evenly convex, with a large basal impression, the bottom of which is longitudinally acute, coarsely, very deeply and densely punctate, with a very fine raised median line, rather abruptly and deeply but not very widely concavo-explanate and similarly punctate at the sides, the reflexed edge very thin; elytra oblong, parallel, with feebly arcuate sides, scarcely perceptibly wider behind the middle, a third wider than the prothorax and between three and four times as long, two-thirds longer than wide, obtuse and very declivous behind, the lobe small and feeble; surface very strongly, evenly cylindro-convex, rather finely but deeply and closely, unevenly punctate, the fulvous hairs erect, fine, rather long, the vestigial costules and side margin very evident, the humeral carinule rather short but strong, unevenly sinuous; abdomen finely rugu'ose and finely, rather sparsely punctate, somewhat shining; legs very short and slender. Length (2) 16.5-20.0 mm.; width 7.6-9.2 mm. Oregon.....crinitus n. sp.

Sides of the pronotum rather narrowly deplanate, not reflexed; pubescence of the elytra extremely short, only evident, even posteriorly, when viewed tangentially to the surface. Body much shorter, relatively more ventricose, very convex, black or with scarcely piceous tinge; head barely at all impressed, the deep punctures coarse and fine densely intermingled; prothorax relatively much smaller than in *crinitus* and more transverse, nearly twice as wide as long, nearly as in *crinitus* but deplanate and much more coarsely punctate at the sides and with the apical angles still shorter and blunter; basal impression rather smaller, much less conspicuous;

lateral edges similarly thin and with a fringe of short stiff hairs; elytra not more than two-fifths longer than wide, nearly one-half wider than the prothorax, scarcely perceptibly wider behind the middle, the sides subparallel and broadly, subevenly arcuate, rounding rapidly behind, the apex very broadly and obtusely ogival, the apical lobe obsolete; surface very convex, rapidly very steep behind, smooth and even, the fine vestigial lines only just apparent, the punctures small, uneven in size and very close-set; side margin distinct and ridge-like to apical fifth, reflexed and cariniform, with the surface within it concave at the humeri, which are rather obtuse and blunt; abdomen shining, finely, rather closely, asperulately punctate; legs short and very slender, the tarsi short. Length (3) 18.0 mm.; width 9.0 mm. Oregon.....puncticollis Lec.

3—Form oblong-oval, very convex, deep black; head moderately impressed, strongly, rather closely but not very coarsely punctate, the interspaces minutely, closely punctulate and dullish, each puncture with a small blackish seta; antennæ nearly as usual; prothorax onehalf wider than long, three-fourths as wide as the elytra, the apex narrower than the base, moderately sinuate, with acute angles, the sides evenly and strongly arcuate, the basal angles obtuse but not rounded, free by reason of the small basal sinus bounding them internally; surface evenly convex, feebly impressed transversely along the basal margin, rather coarsely, very deeply, closely and evenly punctate, each puncture with a very small blackish seta, the interspaces dull, very minutely, closely punctulate; sides rather broadly concave, coarsely and confluently, rugosely punctate and strongly reflexed, the edge very thin; elytra scarcely one-half longer than wide, oblong, the parallel sides broadly, evenly rounded, the humeri rather obtusely angulate, the apex very broadly and briefly ogival; surface very convex, rather shining, with many small deep subtransverse creases, becoming deeper rugæ laterally, also with minute sparse asperate punctures, each with three feeble vestigial costæ, the lateral joining the side margin near the base, the margins acute and cariniform but reflexed only basally near the humeri, extending nearly to apical fifth; abdomen very minutely and densely punctato-rugulose and with the usual minute sparse punctures; legs rather slender but unusually short. Length (3) 15.5 mm.; width 8.4 mm. Utah (Stockton)......tetricus n. sp.

Form very robust, black, opaque; head coarsely punctate; prothorax one-half wider than long, feebly convex, coarsely and densely punctate, confluently so at the sides, which are broadly rounded, the margin moderately broad [reflexed?], anteriorly emarginate with the angles acute, posteriorly feebly rounded, the rounding starting from within the angles and not from the angles themselves, the latter distinct but not prominent; elytra very broadly oval or obovate, very convex, suddenly declivous and very obtuse behind; margin scarcely evident, the humeral angles distinct, not prominent, the base feebly emarginate; surface faintly and obscurely rugose. Length 16.5 mm. Locality not stated. [Asida consobrina Horn].

There can be but little doubt that *tetricus* and *consobrinus* are allied, but the fact that the side margins of the elytra are said to be scarcely evident in *consobrinus* and the published figure (Rev. Ten., plate), indicating a much more inflated hind body, with more strongly arcuate sides, coupled with the absence of any allusion to faint elytral costulation, would seem to show that they are distinct, even allowing for the possibility that the figured type of *consobrinus* may be a female. The general facies of these species strongly suggests a still more abbreviated *puncticollis*, but the sides of the less convex pronotum are much more broadly reflexed.

Group V—Type angulatus Lec.

The rather numerous species of this group are even more closely confined to the limits of California than those of the *costipennis* group and are more especially peculiar to the coast fauna, extending northward as far as San Francisco Bay. They are distinguishable at once from any of the preceding groups by having no vestige of cariniform side margins of the elytra; although the elytra may be sharply margined occasionally toward base, this margin is never cariniform but due to a simple compression of the flanks and seems to be more especially developed in the male. The group may be divided into two sections, the second of which is more essentially southern, being abundant in the vicinity of San Diego.

Sides of the prothorax subparallel and evenly, rather strongly rounded Sides of the prothorax dilated and prominent at or behind the middle, generally bluntly angulate; elytra sometimes having each two or three very feeble fine vestigial costulæ.....9 2—Head very finely and sparsely punctured. Black, shining, similar in form to costipennis and differing in its very finely and sparsely punctured head and more convex prothorax, which is less margined and scarcely punctured; elytra elongate-oval, the margin broadly rounded [in transverse section], the surface entirely smooth and without trace of costæ. Length 15.0-20.0 mm. California (east and west sides of the Tulare Valley, several hundred miles northward of Fort Tejon). [Asida captiosa Horn].....captiosus Horn Head punctured as in costipennis and related forms, the punctures rather large, deep and conspicuous and usually mingled with very small 3—Smaller species from the middle coast regions......4 Larger species from the more southern and interior regions of California.5 4—Body moderately slender, convex, deep black; head deeply impressed,

the punctures conspicuous; antennæ as long as the prothorax (σ^{7}) or materially shorter (2); prothorax fully three-fifths wider than long, widest at the middle, the sides strongly arcuate, rather more convergent and straighter basally than apically, the apex broadly, feebly sinuate and generally feebly, angularly prominent at the middle of the sinus, the angles blunt though slightly everted; base about as wide as the apex, the angles very obtuse and somewhat blunt, not bordered internally by a basal sinus; surface broadly, evenly convex, feebly flattened medially at base, rather shining, finely but deeply, sparsely punctate, the sides rather abruptly very narrowly explanate and more coarsely but not densely or rugosely punctate, the edge with a narrow convex bead; elytra as wide as the prothorax (\mathcal{O}^{1}) or a little wider (\mathcal{O}) , twice as long as wide, widest at the middle, the sides rather distinct and bluntly acute basally, evenly arcuate, the large apical lobe very feebly delimited; ends of the basal margin parallel and slightly tumid but not at all dentiform; surface very convex, sparsely creased, minutely, sparsely punctate, even; abdomen shining, finely creased and minutely punctate; legs only moderate, slender. Length (7, 9) 16.0-17.5 mm.; width 6.5-7.0 mm. California (south of San Francisco and at Monterey), —G. W. Dunn..... maritimus n. sp.

A—Similar to the preceding but narrower and still more convex, almost circular in section, the head with the coarse deep punctures very dense and subconfluent before, well separated behind, the impression; prothorax less transverse, barely one-half wider than long, widest slightly behind the middle, the sides broadly rounded and arcuate to the basal angles, which are still more obtuse, rounded and almost obliterated; surface similar but still more abruptly and narrowly concavo-explanate laterally, with finer subcrenulate marginal bead; elytra much more than twice as long as wide, similarly rather shining, even, finely and obsoletely creased and very minutely, remotely punctulate but with the margins basally scarcely so definite; legs and tarsi still shorter. Length (9) 17.5 mm.; width 6.7 mm. California (south of San Francisco),—G. W. Dunn......imulus n. subsp.

Body very slender, not quite so convex, more highly polished, deep black; head alutaceous, more feebly impressed, the coarse deep punctures rather close-set throughout, the fine ones distinct; prothorax one-half wider than long, the apex very feebly sinuate, with the angles bluntly rounded and not sensibly everted, as wide as the base, which is almost evenly arcuate from side to side, the angles very obtuse though evident; sides parallel, very evenly and strongly arcuate throughout; surface nearly as in maritimus, shining, the fine sparse punctures still more perforate and distinct, the sides less narrowly explanate, strongly but not closely punctate, the marginal bead much finer, elytra much more than twice as long as wide, about equal in width to the prothorax, nearly as in maritimus but more polished, the side margins basally very much more compressed, being really acute and coarsely, feebly crenulate; abdomen alutaceous, finely,

closely, subimbricately sculptured and finely punctulate, becoming more shining and strongly though not densely punctured posteriorly; legs moderately long, the tarsi well developed. Length (3) 16.5 mm.; width 5.8 mm. California (Monterey),—G. W. Dunn.

subelegans n. sp.

- 6-Prothorax of the female evidently narrower than the elytra. Body moderately slender, alutaceous to subopaque, deep black; head with the coarse punctures strong but rather sparse, the fine ones very evident, the surface transversely impressed, with a connecting impression proceeding thence along the median line to between the eyes; prothorax one-half to three-fifths wider than long, widest at the middle, with strongly, evenly arcuate parallel sides, the feebly sinuate and medially subcuspid apex nearly as wide as the base, with the angles rather blunt and very feebly everted; surface evenly and broadly convex, having very fine sparse punctures with minuter ones sparsely scattered over the interspaces, the sides gradually and narrowly declivo-explanate and more coarsely punctate, the edge beaded and transversely rugose; elytra equal in width to the prothorax, nearly a third wider in the female, widest at the middle, with arcuate sides, the edge becoming very obtusely evident basally and crenate; ends of the basal margin feebly dentate; surface very convex and smooth, very finely, sparsely creased and with excessively minute and remote punctules; abdomen (3) opaque, extremely minutely, densely punctulate and with fine, sparse punctures or, (\$), more shining, with fine anastomosing and sparser creases and less distinct sparse punctulation; legs moderate. Length (♂,♀) 17.0-19.5 mm.; width 6.8-8.5 mm. California (Kaweah River, Tulare Co.)....tularensis n. sp.
- Prothorax of the female about as wide as the elytra.....7 7—Form moderately slender, strongly convex, moderately shining, densely alutaceous anteriorly, deep black as usual; head broadly and strongly impressed transversely, strongly, closely impresso-punctate; prothorax two-thirds wider than long, the apex not quite as wide as the base and rather deeply sinuate, the angles subacute, slightly blunt, not at all everted; sides parallel, evenly and strongly arcuate; surface evenly convex, the feeble flattening medially along the basal margin sometimes obsoletely divided by a feeble elevation of the median line, also with a minute feeble circular indentation on each side of the median line before the middle, the punctures extremely minute and rather sparse, the side slopes becoming very gradually and rather broadly deplanate, coarsely and somewhat closely punctate, the edge with a fine even rugulose bead; elytra scarcely wider than the prothorax, a little more than twice as long as wide, widest at the middle, with the sides only moderately arcuate, the ends of the basal margin feebly dentiform, strongly convex, the side margins

becoming rather acute and crenate basally, the surface even, nearly as in *tularensis* but rather more shining and with the creases somewhat less distinct; abdomen with a coarse reticulation of impressed anastomosing creases, the last segment finely, sparsely punctate, becoming rather abruptly coarsely punctato-rugose in about apical third; legs, tarsi and antennæ short. Length (\bigcirc) 21.0 mm.; width 8.4 mm. California,—Morrison.....amplicollis n. sp.

Form rather more slender and subcylindric, very convex, deep black, rather shining; head strongly, transversely impressed, the larger punctures well separated, the smaller very conspicuous; prothorax scarcely visibly narrower than the elytra, scarcely more than onehalf wider than long, evenly and broadly convex, without impressions, nearly as in amplicollis but more shining, less strongly rounded at the sides and with the porrect surface along the sides narrower and much more abruptly formed, the edge rugose but without so clearly defined a beading, the apical angles more bluntly rounded; elytra evidently more than twice as long as wide, widest at the middle, the sides very evenly arcuate throughout, the apical lobe not clearly demarcated, the surface very convex, even, feebly creased, with the reticulations slightly convex, the excessively minute sparse punctules scarcely visible; side margins bluntly prominent and deeply, transversely creased basally; abdomen nearly as in amplicollis throughout, the punctures and rugulosity of the apical part of the last segment much less marked; legs evidently longer and stouter, the prosternum and propleura similarly coarsely, sparsely and perforately punctate. Length (♀) 22.5 mm.; width 8.6 mm. California (locality and collector unrecorded).....integer n. sp.

8—Body large and very stout, strongly convex, deep black and very shining throughout; head moderately punctured and impressed, also with a small feeble longitudinal impression on the vertex, and, behind the impression between the eyes, a very small feeble tubercle; prothorax very convex, polished, three-fourths as wide as the elytra, not quite one-half wider than long, the apex evidently narrower than the base, deeply sinuate, the sinus with a broadly obtuse medial projection, the angles acute and not blunt, not at all everted; sides strongly, very evenly arcuate; surface even, very minutely, sparsely punctate, more coarsely but not densely so on the lateral slope and side margins, which are abruptly and extremely narrowly declivoexplanate, much less widely so than in any other species of this group, the edge finely, feebly crenulate and narrowly, faintly beaded, basal angles very obtuse though evident because of a very feeble and broadly diffuse sinuation before them; elytra three-fourths longer than wide, much more obliquely and rapidly subacute posteriorly than in the preceding species, widest at the middle, the sides arcuate; ends of the basal margin not at all modified; surface very convex, even, nearly as in *integer* but more polished, the side margins basally rather distinct, very coarsely and deeply creased transversely; abdomen throughout similar; legs rather long and notably thick; prosternum between the coxæ peculiarly and densely rugose, smooth

and with fine sparse granules along the middle; propleura with the punctures gradually smaller externally. Length (9) 24.0 mm.; width 11.0 mm. California (probably southern)....crassus n. sp.

10—Body rather slender (\mathcal{P}) or stout (\mathcal{P}) , somewhat shining, deep black; head feebly impressed, sparsely punctate, more densely near the apex of the epistoma; antennæ moderately long, the third joint twice as long as wide or nearly so in both sexes; prothorax threefifths to two-thirds wider than long, about as wide as the elytra (σ^{-1}) or not more than three-fourths as wide (9), very minutely punctulate, the sides bluntly angulate and narrowly rounded slightly behind the middle, the apical angles acute, only very slightly everted, the sides at and near the prominence slightly reflexed and somewhat thickened; elytra a little more (\mathcal{O}^1) to slightly less (\mathcal{O}^1) than twice as long as wide, evenly oval, gradually pointed and but moderately declivous behind as usual, rarely with traces of three fine riblets, the surface very convex, even and impunctate, very faintly creased, the sides very obtusely rounded in section throughout; abdomen very finely, closely micro-punctulate, rather sparsely and finely creased, and, toward tip, finely and sparsely punctate; legs long. Length $(\emptyset^7, \mathcal{P})$ 22.6-25.0 mm.; width 8.0-10.0 mm. California (San Diego). [Pelecyphorus angulatus Lec.]

angulatus Lec.

Body similar but more elongate and subcylindric, not so shining, the head and antennæ nearly similar, the prothorax not quite so transverse and with the sides behind the middle notably still more narrowly rounded and anguliform, the acute apical angles more everted; elytra (σ^1) nearly two and one-half times as long as wide, scarcely visibly wider than the prothorax, as in *angulatus* but duller; abdomen more finely and densely sculptured, rather dull, the scattered very minute punctules inconspicuous, the apical punctures fine and sparse; legs still thicker, of about the same length, the tarsi somewhat shorter and very distinctly thicker. Length (σ^1) 25.0 mm.; width 8.7 mm. Southern California,—Sanford.......deceptor n. sp.

II—Body (5) distinctly stouter than in angulatus, similarly deep black and rather shining, the head more densely punctate, the punctures similarly of two sizes and finer and sparse on the vertex; antennæ similar but more dilated apically; prothorax less transverse, similar, except that the converging sides anteriorly are still more rounded, the acute apical angles more everted and the minute punctures evidently less sparse; elytra twice as long as wide, nearly as in angulatus but a little stouter, barely at all wider than the prothorax and less gradually acute posteriorly; abdomen with the dense minute sculpture stronger, the surface almost opaque; legs and tarsi notably long and still thicker; anterior tarsi shorter, with the three perfoliate intermediate joints much more transverse and more than twice as wide

Body elongate-oval, black and opaque; head very sparsely punctate; prothorax a third wider than long, rather widely and acutely margined, the surface very feebly convex, sparsely punctured medially, more coarsely and densely at the margin, the sides strongly rounded, subangulate at the middle; apex deeply emarginate, the angles acute and prominent; base bisinuate, the angles obtuse; elytra elongate-oval, without marginal costa or ridge, the humeral angles rounded; surface very faintly subtricostate; prosternum truncate. Length 17.0 mm. California (Owen's Valley). [Asida luctata Horn].

luctatus Horn

The elytra in the first section are evidently less convex and in particular more depressed toward the sides basally in the male than in the female, but this character is not at all apparent in the angulatus section. Crassus is a species altogether isolated in general appearance, with side margins of the prothorax almost as fine and feebly marked as in group VI. Luctatus is evidently out of harmony with the rest of the angulatus group in several published characters and in all probability will prove to form the type either of a distinct group of Euschides or a separate genus. The allusion to a truncate prosternum in luctatus is not altogether clear, for, if that part between the coxe is posteriorly porrect and subhorizontal to the tip, the species would evidently form a separate genus allied to Stethasida and be widely out of place here, where it was placed by its author.

Group VI—Type convexicollis Lec.

With a form of body strongly resembling, in its smaller prothorax and obovately inflated hind body, the next or *obovatus* group, though markedly more convex, the few species of this group possess two highly distinctive features, the first relating to the side margins of the prothorax, which, instead of being deplanate or concave as in all the preceding groups, are here very fine and extremely narrowly and steeply declivo-subexplanate; the second concerning the eyes, which are notably larger than in any other type of the entire Asidini as yet coming under my observation. The eyes are, as usual,

very convex, narrowing inferiorly and with the oblique lower part of the anterior margin somewhat sinuate; a narrow deep groove, coarser above, borders them anteriorly. The antennæ are rather more slender than usual, gradually dilated distally to the tip of the tenth joint, and are strongly compressed throughout and not alone apically as in most of the preceding groups. The convexicollis group is confined apparently to the Rocky Mountain region and slightly to the eastward from Nebraska to northern Mexico.

Prothorax virtually as long as wide. Body black, shining, the convex prothorax obsoletely punctulate, more distinctly at the sides, which are rounded and finely margined, the angles all obtuse, not at all prominent, the base rounded; elytra oboyate, much wider than the prothorax, especially in the female, the sides not at all margined, the apex strongly declivous and obtusely acuminate, sparsely punctulate and sparsely, finely rugose. Length 15.8-21.2 mm. [probably including a mixture of allied species and subspecies]. Found at various localities along the southern boundary of New Mexico.

convexicollis Lec.

2—Elytra nearly even. Form stout, the hind body inflated, deep black, rather shining, glabrous as usual; head deeply and rather acutely impressed transversely, strongly, rather closely punctate anteriorly, each puncture with a short erect seta, finely and sparsely on the vertex, with the punctures nude, the eyes only moderately convex; antennæ (2) rather long, as long as the prothorax, strongly compressed; prothorax a little less than two-thirds as wide as the elytra, nearly one-half wider than long, the apex feebly, evenly sinuatotruncate, somewhat narrower than the base, which is strongly and broadly lobed, becoming narrowly and feebly sinuate near the angles, which are obtuse but not blunt and feebly prominent, the apical angles not at all advanced, right and scarcely at all blunt; sides very evenly and moderately arcuate throughout; surface evenly and strongly convex, subopaque, minutely but perforately, sparsely punctulate, the gradually very steep sides becoming strongly but not densely punctate near the feebly cariniform margins; scutellum well developed, broadly triangular; elytra two-thirds longer than wide, widest at three-fifths, oboval, with rather strongly rounding sides, the latter more rapidly rounding behind, the apical lobe small and obtuse; surface even, smooth, broadly, feebly impressed along the suture except basally and at apex, shining, feebly, sparsely, impressedly-creased and minutely, remotely punctulate, the side margins evident as a subacute line to apical fourth, the line very well defined but not cariniform, except very near the basal angles, where it becomes acutely elevated and cariniform and bordered internally by a deep depression; abdomen strongly alutaceous, very minutely, remotely punctulate; legs very slender and rather long, strongly sculptured. Length (2) 19.0-22.6 mm.; width 9.0-11.6 mm. New Mexico,—Schaupp......inhabilis n. sp.

A—Form nearly as in *inhabilis* but less shining and with the elytra picescent; head nearly similar, the eyes more convex; antennæ similar; prothorax not three-fifths as wide as the elytra, almost as in the preceding, widest before the middle but with the base rather narrower than the apex and with the side margin even less defined, obsolescent; elytra nearly three-fourths longer than wide, widest at three-fifths, almost as in *inhabilis* but duller and less convex and with a fine, feebly eroded line, on each, parallel to and at some distance from the suture, the subacute side margin wholly obsolete even basally, the humeral carinule distinct but short, the punctures notably larger, closer, deeper and unequal in size; abdomen rather shining, minutely punctulate; legs shorter, very slender. Length (9) 20.8 mm.; width 10.3 mm. Kansas.....retusus n. subsp.

3—Form elongate-oval, very convex, deep black and highly polished, the anterior parts and abdomen alutaceous; head nearly as in the preceding, deeply and acutely impressed transversely; antennæ scarcely as long as the prothorax, the latter (σ) nearly one-half wider than long and fully two-thirds as wide as the elytra, as in inhabilis throughout, except that the sparse punctulation is still more excessively minute, the surface at the sides more shining, the basal margin not at all sinuate near the basal angles, which are very obtuse and blunt as well, not distinct, and that the greatest width is very slightly before the middle and not exactly at the middle as in that species, the sides similarly broadly, subevenly arcuate; the apex, also, is rather more sinuate though very feebly; elytra fully four-fifths longer than wide, evenly oval, widest but little behind the middle, the apical lobe large though feebly defined, the sides evenly arcuate, with the margin rather acutely defined to apical fourth, the ridge at the humeri short but strongly elevated and cariniform; surface very convex, the punctures rather strong, only moderately small and not very sparse, each with three wide irregular impressed lines, the median much the broadest, the wide swollen intervals broadly convex; legs long and very slender. Length (σ) 20.0 mm.; width 8.8 mm. New Mexico (locality unrecorded).

fastigiosus n. sp.

Form rather narrow, not quite so convex, similarly deep black and lustrous; head not so sharply impressed, otherwise nearly similar; prothorax nearly similar throughout, less than two-thirds as wide as the elytra, the latter not more than two-thirds longer than wide, moderately convex above, as usual rapidly convex and becoming vertical at the sides, widest at three-fifths, the apical lobe large, short and feebly defined, the sides strongly arcuate, less arcuate and converging from behind the middle to the base, the side margins very narrowly rounded in section but without trace of acuteness at any part, the basal carinule extremely short and confined to the humeral angle itself; surface of each with two rather fine but broadly and feebly elevated vestigial ridges, wholly unlike the broad obtuse ridges of fastigiosus, polished and smooth, the punctures small but

very distinct, deep and decidedly sparse, varying slightly in size; abdomen rather shining but minutely, closely sculptured; legs very much shorter than in *fastigiosus* and still more slender. Length (3) 18.0 mm.; width 8.2 mm. Nebraska,—Warren Knaus.

globicollis n. sp.

It is highly probable that the form assigned above as a subspecies of *inhabilis* has in reality somewhat greater weight, but, as there are only three females of both forms at hand, it may be held to be a subspecies for the present. There is some difference in the convexity of the eyes between *inhabilis* and *retusus*, which may be important taxonomically. The difference in the length of the legs between *fastigiosus* and *globicollis* is a very striking character.

Group VII—Type obovatus Lec.

The various species, subspecies and perhaps other forms still less advanced in differentiative evolution, here become very numerous and troublesome, both in defining and recognizing from even the most carefully prepared descriptions. Although the outline of the body, with the obovately inflated elytra, is nearly as in the preceding group, the eyes are very short and transverse and the antennæ scarcely compressed except distally, conforming to the usual condition in the genus in these respects, and the body is always notably less convex. The group is abundantly diffused over the southern Rocky Mountain region, extending to the eastward into Kansas and New Mexico. It has never been found in California, so far as known to me. The assumed dichotomous characters in the following table are rather feebler than in any other group of the genus. The male seems to be more abundant than the female as a rule.

 though narrowly deplanate, more coarsely punctate and rugose, the edge evenly, rather strongly arcuate throughout, thickened and elevated; apex deeply, evenly sinuate and distinctly narrower than the base, the angles acute, not at all everted; base sinuate near the basal angles, which are obtuse but distinct and posteriorly minutely subprominent; elytra one-half longer than wide, widest at three-fifths, the apical lobe moderate and distinct; sides arcuate, unmargined except feebly at the basal angles, which are rather acutely prominent; surface convex laterally, broadly impressed suturally, with the feeblest traces of the vestigial riblets, smooth to subrugosely creased, the minute punctures scarcely visible except sometimes on the flanks; abdomen very minutely chagrined, minutely, sparsely punctulate, more distinctly toward apex; legs only moderate in length and very slender. Length $(\circlearrowleft, \circlearrowleft, \circlearrowleft)$ 20.0–23.0 mm.; width 10.0–11.8 mm. Arizona (regions near Nogales).....vigens n. sp.

4—Body, and especially the prothorax, strongly, evenly convex, black, the elytra dark piceo-rufous, very shining throughout; head shining, moderately and sparsely punctate, feebly tri-impressed; antennæ rather slender; prothorax fully two-thirds as wide as the elytra (2) or three-fourths (\emptyset), two-fifths wider than long, the apex narrower than the base, deeply and evenly sinuate, the angles acute but not at all everted, the basal angles very obtuse but distinct, the sides of the base broadly, feebly sinuate; surface strongly declivous and subimpressed medially at base, very minutely, sparsely punctulate, the sides abruptly but narrowly deplanate, strongly but sparsely punctate and less shining, the edge evenly and moderately arcuate, smooth and strongly, abruptly and narrowly elevated; elytra twothirds longer than wide, moderately dilated posteriorly, more parallel and with straighter sides in the male, widest at three-fifths, shining, strongly, subevenly convex throughout or subimpressed suturally, each with two feeble threads, the inner alone distinct, very unevenly and sparsely creased and with small sparse uneven punctures suturally; humeral carina very short but elevated, the sides rounding to the basal angles; abdomen shining, very smooth, duller and finely punctate posteriorly; legs rather short, very slender. Length (8), ♀) 18.0-20.0 mm.; width 8.4-10.4 mm. Colorado and Western Kansas.....convexus Lec.

Body rather strongly convex, the elytra almost evenly so transversely, piceous-black, the elytra brownish-rufous, rather dull in lustre throughout and narrower and more cylindric than in any other of this group; head very feebly impressed transversely, the punctures deep, rather coarse and close-set anteriorly, gradually finer and sparse posteriorly, the antennæ well developed, somewhat slender; prothorax three-fourths as wide as the elytra, nearly as in the preceding but opaque and widest and more strongly rounded at the sides slightly behind the middle, the minute sparse punctures not so small and deeper, the sides less narrowly explanate, the margins narrowly and strongly elevated and punctate; middle of the base rather acutely, longitudinally impressed; elytra moderately obovoidal, fully three-

fourths longer than wide, widest at three-fifths, the converging sides basally feebly arcuate, with a small deep angular nick just behind the basal angles, which are thereby rendered prominent, the basal carinule very short and feeble; surface dull, with the inner vestigial costule forming a rather wide and feebly convex line, the others obsolete, the creases small and rather close, producing feeble rugosity, the punctures rather strong but unequal suturally, the flanks rugose with deep transverse wrinkles; legs very slender. Length (\vec{o}^1) 20.0 mm.; width 8.2 mm. Kansas (locality unrecorded).

gracilior n. sp. Body less convex, the elytra more or less strongly oboval, much less convex or flattened medially, rarely broadly impressed along the suture. 5 5—Prothorax, at least in the male, larger, fully three-fourths as wide as the elytra.....6 Prothorax notably small, sometimes but little more than half as wide as the elytra in either sex.....9 6—Sides of the prothorax rather widely concave for the present group...7 Sides very narrowly concave......8 7—Form only moderately elongate, rather shining, black or feebly picescent; head rather strongly and narrowly impressed transversely, finely and sparsely punctate, more coarsely and closely along the margins only; prothorax about a third wider than long, the sides parallel, evenly and rather strongly rounded, the apex moderately deeply, subcircularly sinuate, the angles rather blunt; punctures minute and sparse, the sides rather widely and deeply concave, sparsely and distinctly punctate, the strongly elevated edge thin; elytra strongly oboval and posteriorly inflated, the sides strongly rounding to the

base, the apical lobe small but evident; surface feebly impressed

B—In general outline rather similar to the preceding forms but with the elytra piceous-brown and subopaque, black, anterior parts and more or less piceous under surface feebly alutaceous in lustre; head broadly and feebly impressed transversely, sparsely and not at all coarsely punctate throughout; antennæ long (7) or much shorter (9); prothorax as in *obovatus* throughout, the sinuation of the converging sides anteriorly still more perceptible. the sinus at each side of the base much broader and feebler; elytra similar in form but more dilated and much duller, confusedly creased and having each also two or three fine impressed longitudinal lines formed of connected subsinuous creases, smooth externally, having suturally small very feeble punctures; humeral carinule much less abbreviated than in any of the preceding, sharply elevated, laterally feebly sinuate behind the basal angle; legs slender, very much longer in the male than in the female. Length (♂, ♀) 19.0-20.5 mm.; width 9.0-10.2 mm. Arizona (Sta. Rita Mts.,—near the southern boundary).....gliscans n. subsp.

8—Body somewhat shorter and more oblong than usual, convex, alutaceous, black, the elytra dark piceous-brown; head strongly impressed transversely, with rather sparse and moderately coarse punctures, becoming very fine basally; antennæ with the third joint unusually long, three to five rapidly and evenly decreasing, the latter one-half longer than wide; prothorax fully two-fifths wider than long, evenly convex and extremely minutely, sparsely punctulate, the parallel sides evenly and rather strongly arcuate, the concave margins narrower than in any other species, with moderately coarse, decidedly sparse punctures; basal angles obtuse and almost obliterated, the adjoining basal sinus subobsolete; elytra barely two-fifths wider than the prothorax, three-fifths longer than wide, parallel and very evenly rounded at the sides to the base as in gliscans, more rounding posteriorly, the apical lobe distinct; humeral carinule very short, slightly tortuous; surface feebly impressed along the suture, strongly creased and opaculate, minutely, sparsely punctulate; legs slender. Length (3) 18.0 mm.; width 8.7 mm. Unlabeled in the Levette collection but probably from southern Arizona....consuctus n. sp.

Body only moderately inflated and rather convex posteriorly, with the elytra only feebly flattened medially, feebly shining to rather dull in lustre, black, the elytra dark piceous-brown; head feebly impressed transversely, the punctures rather strong and close anteriorly, sparse but distinct and deep elsewhere; prothorax two-fifths wider than long, the parallel sides moderately rounded, feebly sinuate anteriorly, the surface strongly alutaceous, with the fine sparse punctulation very distinct, gradually or not very abruptly becoming distinctly explanate and coarsely sparsely punctate laterally to the strongly, abruptly elevated and rather thin punctulate edge; basal sinus at each side very broad and feeble; elytra nearly three-fourths longer than wide, in outline somewhat as in consuetus but less flattened and not at all impressed suturally, more or less dull in lustre, with numerous irregular creases, sometimes decidedly

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rugulose, especially apically and suturally, where the strong irregular punctures are very conspicuous; inner vestigial costule and sutural margin rather wide and convex, usually very distinct, the two outer lines fine but evident; sides toward base nearly straight, the humeral carinule extremely short and feeble; abdomen shining, feebly wrinkled; legs short and slender, the hind tarsi barely half as long as the tibiæ. Length (\bigcirc) 20.5–21.0 mm.; width 9.3–9.6 mm. New Mexico,—Schaupp......socialis n. sp.

9—Elytra very strongly inflated, but little longer than wide and strongly, broadly impressed along the suture. Body moderately convex, black, alutaceous, the elytra blackish to piceo-rufous; head strongly impressed transversely, moderately strongly and not closely punctate anteriorly; prothorax two-fifths wider than long, but little more than half as wide as the elytra, parallel and rounded at the sides, the latter anteriorly becoming broadly sinuate, the apical angles much produced and very acute; surface minutely, sparsely punctulate, obliquely and approximately bi-impressed at the middle of the base, abruptly and deeply concave and more strongly punctate at the sides, the upturned edge thin; basal angles distinct and not rounded, the basal sinus adjoining very feeble; elytra two-fifths longer than wide, the surface perfectly even, opaque, finely creased and punctulate throughout, the apical lobe small and obtusely projecting; humeral carinule very short and subobsolete in the type, very distinct in another example; abdomen nearly smooth, punctulate posteriorly, the fifth segment punctate and feebly, transversely rugulose, the entire posterior margin of the fourth deeply parabolic; legs very slender. Length (♀) 18.5–19.2 mm.; width 9.7–10.3 mm. Arizona (Huachuca Mts.) huachucæ n. sp.

10—Form moderately inflated, the prothorax transverse, black and rather shining throughout; head feebly bi-impressed, sparsely, rather strongly punctate, the vertex finely, sparsely so and gradually tumescent medially at base; prothorax about one-half wider than long, almost as in gliscans, except that the apical angles are not quite so acute, the obtuse basal angles nearly similar, the lateral sinuses of the base much broader and feebler, the concavo-explanate side margins narrower; elytra relatively longer in the male, threefifths wider than the prothorax and fully one-half longer than wide, the apical lobe similarly moderate in size and distinct, the sides arcuate, the humeral carinule nearly similar, rather short but evident, less broadly flattened and feebly convex medially, the vestigial costules evident; surface decidedly rugose, confusedly, deeply creased and with small sparse punctures, becoming strong and uneven in size suturally; abdomen shining; legs moderately long, very slender, Length (♂,♀) 18.0-19.5 mm.; width 8.5-9.0 mm. New Mexico (Thornton, Magdalena Mts. and Jemez Springs). Abundant.....consors n. sp.

Form nearly as in *consors* but differing in its piceous-brown elytra,

having the converging sides straight or even indistinctly and very broadly sinuate basally, and not feebly rounding to the base as in that species, black, strongly alutaceous throughout, or with the elytra feebly shining; head and prothorax rather small in size, the former shallowly impressed, the punctures sparse, small and more minute intermingled, becoming closer and rather coarse but still uneven in size anteriorly: antennæ rather short; prothorax about a third wider than long, minutely, sparsely punctulate, with unusually advanced and acute apical angles and parallel and evenly, somewhat strongly arcuate sides, the sides somewhat broadly concave, sparsely and moderately strongly punctate, the basal angles distinct though obtuse; elytra strongly posteriorly inflated, three-fifths (♀) to twothirds (\emptyset^1) longer than wide, widest at three-fifths, the sides rounded, the apical lobe narrow and distinct; humeral carina very short, obtusely elevated; surface broadly flattened above, creased, minutely, sparsely and obsoletely punctulate, with a number of fine longitudinal lines formed of more distinct creases usually evident. Length (σ^7, \mathcal{P}) 18.8-19.5 mm.; width 8.8-9.7 mm. Arizona (Nogales, Sta. Cruz Co.)..... papagoanus n. sp.

Form somewhat slender and convex, black and rather shining throughout; head very feebly impressed, more sharply at the inner ends of the oblique sutures, rather strongly but sparsely punctured, more finely posteriorly; antennæ with the subapical joints much less elongate than in consors; prothorax a fifth to more than a fourth wider than long, the parallel sides subevenly and rather feebly arcuate, feebly subsinuate near the acute apical angles, the basal nearly as in gliscans; surface only moderately convex, strongly alutaceous, minutely, sparsely punctulate, rather gradually declivoexplanate and coarsely punctured narrowly at the sides, the impression and side margin obsolete basally; elytra fully two-thirds or more wider than the prothorax (σ^1) to twice as wide (\circ) , two-thirds longer than wide, the sides rounded, moderately converging and less so basally from behind the middle as usual, the surface convex, very feebly and broadly impressed or flattened along the suture, deeply creased and feebly rugulose, shining, finely, sparsely and unevenly punctate and with the vestigial costa more or less distinct; humeral carinule moderately long and evident, irregularly sinuous; abdomen shining, the legs very slender. Length (♂,♀) 15.5-18.0 mm.: width 7.2-9.4 mm. Arizona (Peach Springs),—Wickham and Fuchs. Abundant.....strigosulus n. sp.

Form still more slender and more convex, black and shining throughout; head alutaceous, broadly and moderately impressed transversely, strongly, more or less sparsely punctate, more closely in the male; prothorax about a fourth wider than long, three-fifths as wide as the elytra, convex, highly polished throughout, with the sparse minute punctulation distinct, the sides moderately rounded, straight anteriorly, the angles acute; basal angles very obtuse but distinct, the basal sinuations broad and moderate; sides rather narrowly and abruptly declivo-explanate and coarsely, sparsely punctate to the

high marginal bead; elytra nearly three-fourths longer than wide, widest only slightly behind the middle, oval, the sides strongly rounded, becoming nearly straight basally, the general form remindful of the preceding section of the group; ends of the basal margin feebly dentiform, the carinule wholly wanting; surface rather shining in both sexes, very closely, deeply creased and rugulose, finely but strongly, sparsely punctate throughout, more coarsely and irregularly toward the suture, the inner vestigial costule feeble; abdomen shining, the legs very slender. Length (3) 18.5 mm.; width 9.0 mm. New Mexico (Magdalena Mts.),—F. H. Snow.

congruens n. sp.

A—Similar in general form to congruens but much more shining and more feebly sculptured, the sides of the elytra becoming almost straight basally, black, the elytra piceous-brown; head rather sharply impressed transversely, coarsely, rather closely punctate, finely and sparsely so on the vertex; antennæ much longer than the prothorax, rufo-piceous distally; prothorax as in congruens, except that the coarsely and sparsely punctured sides are much less narrowly and more deeply concavo-explanate and the surface more alutaceous in the male, the marginal bead very thin and high; elytra similar in form, more than one-half wider than the prothorax but very smooth and evenly convex throughout the width, highly polished, with the vestigial costules evident, the punctures very fine and sparse, more evident and unequal suturally, the creases very fine and sparse, the humeral carinule very short and rapidly obsolete though quite evident, the sides of the base scarcely at all prominent; abdomen alutaceous, finely creased, distinctly and rather closely punctured apically; legs very slender. Length (3) 18.5 mm.; width 8.6 mm. Arizona (locality unrecorded).....lubricus n. subsp.

11—Body rather large and narrow, gradually dilated posteriorly, deep black throughout; head rather shining, feebly impressed transversely. more strongly at the sutures, strongly, not closely and rather unevenly punctate; antennæ longer than the prothorax even in the female; prothorax relatively well developed, nearly one-half wider than long, two-thirds as wide as the elytra, subparallel, evenly and somewhat strongly rounded at the sides, the apical angles but slightly blunt, the basal moderately obtuse, very distinct, the basal sinuses broad and extremely feeble; surface subopaque, moderately convex, minutely, sparsely punctulate, rather abruptly and distinctly concavo-explanate and sparsely and strongly punctate laterally, the edge strongly elevated and thin; elytra about three-fifths longer than wide, widest but little behind the middle, the sides strongly arcuate, becoming strongly convergent and broadly sinuate basally, the apical lobe small, moderately distinct, the humeral carinule wanting, the ends of the basal margin feebly dentiform and prominent; surface strongly shining, broadly flattened or slightly impressed medially, the sutural region narrowly and feebly tumescent, the vestigial costules obsolete, the creases feeble and the punctures There are many forms in southeastern Arizona allied to *obovatus*, and they are rather confusing, but with prolonged study, begetting more intimate familiarity, the separation of the species and subspecies finally becomes much less uncertain, and in fact, as they are now arranged in my cabinet, there would scarcely seem to be any great amount of error. *Nitidipennis* and *gliscans* probably are species different from *obovatus*. In one of the specimens of *convexus* before me there is a rather notable deformation of the right antenna, in which the outer joints are much shorter than those of the left antenna, the tenth joint being a rounded solid mass which includes the eleventh, the true spongy apex of the tenth being evident only in outer half of the width at about the middle.

Heterasida n. gen.

In general facies and many features of its organization this genus differs very markedly from any of the preceding and is indeed wholly isolated in the Asidini. The antennæ form one exception in the tribe in having the entire periphery of the apex of the tenth joint spongy-pubescent, and the nature or disposition of the vestiture is also to a greater or less degree peculiar. The type of elytral costulation is approached elsewhere only in Asidina, so far as noted. In the structure of the head and eyes, labrum, prosternum and some other general characters it does not differ essentially from Euschides and many other generic groups, but the fourth palpal joint is not large and scalene in the male but small and recti-triangular, as in all the following genera from this point in the series, and the anterior tibiæ much more nearly resemble those of Pelecyphorus, differing greatly from Euschides in being more cylindric, with the outer angle at apex barely at all everted or acute; the tarsi are spinulo-setose beneath. The mentum is very moderate in size, obtrapezoidal, mounted upon a high gular pedestal and does not quite attain the sides of the buccal opening even anteriorly; the acutely pointed sides of the opening are much prolonged and well developed when compared with some other genera, such as Glyptasida and Pelecyphorus,

where they are very short and obtuse. The few known species may be described as follows:

Hind angles of the prothorax not in the least prominent or acute. Body rather feebly ventricose, deep black, opaque above, rather less so beneath; head broadly, deeply impressed transversely, the impression abruptly terminating at each side in the precipitous straight inner walls of the lateral prominences, the punctures moderate and not dense, the hairs short and very stiff; antennæ rather longer than the head and prothorax, somewhat stout, scarcely at all compressed; prothorax fully as long as wide, the subparallel sides moderately and very evenly arcuate from the basal angles nearly to the apex, where they become sinuate behind the very narrow and anteriorly much produced, acute apical angles; apex deeply sinuate, narrower than the base, the latter broadly, evenly bisinuate, the basal angles right, not blunt and not at all everted; surface strongly gibbous medially, abruptly and very narrowly concave along the margins, which are rather thick and feebly crenulate, the median line narrowly and deeply impressed but only at the summit of the gibbosity, the base not at all impressed; punctures not very fine, strongly asperulate and dense throughout, each with a short and very stiff but simple recurved dark fulvous seta; elytra fully one-half wider than the prothorax, three-fifths longer than wide, widest at the middle, gradually acute behind and moderately declivous, the sides parallel and evenly arcuate to the basal angles, which are obtuse but not blunt, the base transverse, sinuate at and near the rather small scutellum; surface flat or nearly so, with small punctures condensed into regular lines suturally but more dispersed laterally, each puncture bearing a broad recurved piceous scale-like seta, the lateral margin finely but strongly cariniform, abruptly ending near the apex, each having also a strongly cariniform discal costa, beginning behind just above the end of the marginal ridge, gradually approaching the latter anteriorly and fusing gradually with it just before the middle; abdomen strongly, densely, asperately punctate; legs rather short and very slender. Length 16.0 mm.; width 7.0 mm. Lower California. [Pelecyphorus bifurcus Lec.].....bifurca Lec.

2—Body black, opaque, sparsely clothed with short sordid hairs; head and prothorax strongly, densely punctate, the latter longer than wide, moderately and equally narrowed anteriorly and posteriorly, the sides broadly rounded, subcrenate posteriorly, the margin reflexed; anterior angles produced, acute, the posterior acute and diverging; base bisinuate; surface broadly and deeply canaliculate; elytra ovate, obliquely attenuate posteriorly, one-half wider than the prothorax, more finely punctate, the lateral margin and a dorsal costa on each acutely elevated and uniting at the humeri, the

Body somewhat as in bifurca though smaller and much more slender, black, dull and densely coated with earthy matter through which the short stiff and simple bristle-like setæ protrude; head impressed as in bifurca but more feebly, the antennæ more slender; prothorax slightly wider than long, the subparallel sides evenly and more strongly arcuate, not sinuate anteriorly, where the angles are less produced anteriorly but acute, the basal angles abruptly and strongly everted and finely acute, very prominent; surface very tumid medially, the tumidity divided longitudinally by the broadly, deeply impressed and entire median line, which narrows toward apex and base, the lateral slopes of the tumidity feebly, longitudinally impressed at lateral fourth of the width, these furrows not quite attaining apex or base; sides more broadly and shallowly concave than in bifurca; punctures coarser, dense but not so muricate, the stiff short hairs fulvous; base similar; elytra not at all wider than the prothorax, three-fourths longer than wide, gradually very acute behind the middle, where the sides are arcuate, gradually converging and straighter to the similar basal angles, which, however, are far within the thoracic angles; surface flat, though similarly steeply declivous between the costa and the margin, which is as in connivens; suture narrowly elevated in a way not at all noticeable in bifurca, the short stiff blackish setæ differing greatly from those of bifurca in being simple and not squamiform and in being evenly distributed, abdomen closely perforato-punctate, not at all asperulate; legs relatively longer and much stouter. Length (3) 9.0 mm.; width 3.4 mm. Lower California (Cape San Lucas).—Chas. Fuchs. tantilla n. sp.

Body still more slender than in tantilla, deep black, not coated with earthy matter, opaque, the elytra slightly shining; head similar though more deeply impressed, the short erect bristles dark; prothorax similar but about as long as wide, the apex very nearly as wide as the base and more deeply sinuate, with the acute angles more anteriorly projecting; sides moderately arcuate, becoming feebly sinuate anteriorly, the basal angles even more obliquely everted and becoming finely spiculiform toward tip; surface similar, the median entire sulcus even broader and deeper, the lateral moderate; side margins more crenulate and without so distinct a fringe of short erect hairs; elvtra more elongate, scarcely as wide as the prothorax. nearly twice as long as wide, the ridges as in tantilla, the humeri not obtusely angulate as in that species but minutely, denticularly prominent laterally; surface nearly flat, with rather coarse perforate punctures disposed in a few nearly even longitudinal series, the interspaces scarcely at all punctulate but clothed loosely with rather long and closely recurled stiff but nearly simple dark yellow hairs: abdomen more coarsely, very densely cribrate, the punctures simi.

larly simple and perforate, impressed along the middle from the base to the fourth segment, this impression not being visible in tantilla; legs and antennæ very much longer than in tantilla. Length (σ) 10.5 mm.; width 3.8 mm. Lower California (Santa Rosa),—Beyer. exilis n. sp.

Form and facies somewhat as in opaca but with the elytra more narrowed at base and expanded posteriorly, dull, black; elytra with three vittæ of minute granules, each bearing a minute spine-like hair; head moderately coarsely, not densely punctured; prothorax broader than long, slightly narrower in front, the sides feebly arcuate, with a slight sinuation posteriorly, the hind angles acute; surface moderately convex, with faint trace of a median groove, coarsely and closely punctured, more densely at the sides; elytra broadest behind the middle, the humeri distinct but not rectangular, the marginal ridge nearly reaching the apex; surface feebly convex transversely, with three vittæ—one close to the suture,—formed of minute granules, each with a minute hair, a few scattered granules in the interspace next the margin, otherwise quite smooth; prothorax beneath punctate medially, granular at the sides; meso- and sides of the metasternum coarsely granular; abdomen moderately finely, not closely punctate, bearing short hairs; legs roughly punctured. Length 18.0-21.0 mm. Lower California (Pescadero, -west side). [Asida subvittata Horn].....subvittata Horn

I am quite at a loss to know where to place the Asida subvittata of Horn, its opaca-like facies, with elytra enlarged posteriorly, feebly punctured abdomen and absence of discal lateral costa on the elytra being incompatible with Heterasida proper; but, at the same time, there are some characters which seem to indicate that it may be more fittingly attached to Heterasida, provisionally, than to any other genus here defined; among these may be mentioned the feebly impressed median line of the pronotum, —a rather unusual character—and the aggregation of the elytral punctures, which are here granuliform, into clearly defined vittæ, which is one of the notable features of Heterasida bifurca and unknown elsewhere among American species. I have but little doubt, however, that subvittata really constitutes the type of a distinct generic group peculiar to Lower California.

There are so many important differences between the *bifurca* type and *connivens*, *tantilla* and *exilis*, affecting the entire habitus, sculpture and form of the basal angles of the prothorax, that it is difficult to understand why Dr. Horn should have even suspected

any sexual relationship between bifurca and connivens.* fail to comprehend the reference of them to *Pelecyphorus* by LeConte, as the fourth male palpal joint is in no way large and scalene as it is in that genus. My single specimen of bifurca described above is not identifiable sexually, but appears from its notably long antennæ to be a male. All of these remarkable species inhabit the regions about Cape San Lucas and a more thorough examination will doubtless disclose more allied species in that neighborhood. I at first considered the type of tantilla as representing connivens, because it seems to have the same thoracic angles and elytral costæ; but, on more closely reading LeConte's description of connivens quoted above in the table, where the elytra are said to be much wider than the prothorax even in the male, it became evident that they are by no means the same. Tantilla and exilis are among the smallest and by far the slenderest American members of the Asidini, being much more slender than Pactostoma obtecta, and tantilla is even shorter, being probably subsimilar in dimensions to Stenosides texanus Wick.

Asidina n. gen.

The general form in this genus is narrow and parallel, with the dorsal surface flattened, but occasionally it becomes broader and more oval; the integuments are more or less smooth, sparsely and finely punctate, the punctures bearing very short, stiff and simple erect setæ, which are altogether inconspicuous. There is nothing peculiar in the head, labrum, eyes and prosternum, the latter being very steeply declivous or vertical behind, but the antennæ are more or less slender, with the tenth joint wider, betraying an approach to the next genus, from which it differs in the mentum, this being transversely parallelogramic and in close contact at the sides with the sides of the very shallow buccal opening, these lateral projections being as excessively short and obtuse as in *Glyptasida* and *Pelecyphorus*; but the gular pedestal is rather long, only moderately wide and is deeply sinuate medially. The legs are moderately short, slender, clothed with very short and stiff hairs, the

^{*} To set this matter finally at rest it may be stated that since this was written I have received a specimen agreeing fairly well with LeConte's description of *connivens* and having the elytra more than one-half wider than the prothorax. It is about 13.0 mm. in length and the protruded sexual organs show clearly that it is a female.

tarsi rather short and with still shorter, stiffer hairs beneath. The anterior tibiæ are as in the *Pelecyphorus* type, cylindric and scarcely at all everted or acute externally at apex in some, to decidedly spiniform in others, this feature being as inconstant as in that genus. In *Euschides* there is much greater uniformity in this respect, the outer angle being invariably much everted and very acute. The species of *Asidina* are few in number, those so far discovered being very readily distinguishable as follows:

Elytra without a free discal costa, the latter uniting with the marginal carina anteriorly, the marginal carina not bifurcate posteriorly...4

2—Body black, opaque, finely, muricately punctate and hispid; prothorax quadrate, the margins reflexed, the apical angles very acute; elytra nearly flat above, scarcely wider than the prothorax, subparallel, the apex strongly declivous, having near the margin an acute costa which is abbreviated at both ends and parallel with the acute marginal carina. Length 15.0 mm. California (in the mountains of the western part of the Colorado Desert). [Pelecyphorus parallelus Lec.]. parallela Lec.

Body very narrow, parallel, pale piceous-brown in color, the integuments throughout very highly polished; head very feebly impressed, opaculate, strongly, closely punctate and hispid with short stiff pale hairs, the sides before the eyes very prominent but obtuse, the antennæ very slender as in most European Asida; prothorax about a third wider than long, subparallel, the sides evenly and moderately arcuate throughout, the apex narrower than the base and deeply, evenly sinuate, with the angles only moderately produced, acute and with the apex slightly blunt; base transverse, very feebly and broadly bisinuate, the angles obtuse but distinct; surface very evenly and moderately convex, polished, extremely minutely, sparsely punctulate and hispid with very short hairs, the sides very abruptly and strongly reflexed, almost vertical, thin and coarsely, densely, rugosely punctured; base declivo-impressed along the median lobe; scutellum small, equilatero-triangular, opaque; elytra equal in width to the prothorax, fully three-fourths longer than wide, gradually declivous and obtuse behind, the apical lobe from above small but distinct, the sides parallel and feebly arcuate; basal angles obtuse but distinct; side margins strongly cariniform, still more elevated basally, rounding in rapidly behind nearly to the apex, the discal carina strong, extending from basal fourth nearly to apical sixth, becoming but little more distant from the margin posteriorly; surface strongly shining, flat, sparsely and very minutely punctulate and hispid with short pale yellowish setæ; abdomen finely, closely, asperulately punctate and with close and longer, finer pale hairs,

legs rather short, slender, the outer angle of the anterior tibiæ everted and acutely spiniform. Length (probably \circlearrowleft) 12.6 mm.; width 4.9 mm. Arizona..... teres n. sp.

3—Form nearly as in the preceding, subparallel and nearly straight at the sides, the body narrow, slightly larger in size, piceous-black, shining; head more shining, rather deeply, transversely impressed, the punctures strong but rather sparse, the hispid vestiture pale fulvous; antennæ distinctly less slender and darker in color; prothorax much shorter, fully two-fifths wider than long, otherwise nearly as in teres, except that the basal angles are more posteriorly prominent, right and not at all blunt, the polished surface minutely, sparsely punctate medially and feebly, finely impressed along the median line but becoming strongly and more closely punctate broadly toward the sides, the latter similar, the thin edge more evidently minutely crenulate, the base at the middle not so impresso-declivous and the stiff hispid vestiture rather longer and darker in color; elytra slightly wider near apical third than across the humeri, which are obtusely and prominently angulate and joined to the ends of the basal margin by a short oblique sinus, barely a fourth wider than the prothorax and three-fourths longer than wide; sides just visibly arcuate, rounding in very rapidly behind, the surface more abruptly and strongly declivous posteriorly, strongly shining, minutely, sparsely, subgranularly punctulate and with the erect hispid hairs rather longer and much darker in color, flat between the discal ridge and the suture, the former very strongly elevated, tending to coalesce posteriorly with the end of the ramus from the marginal carina, which leaves the latter at apical third; abdomen shining, finely and rather sparsely, subgranularly punctate and with much shorter inconspicuous pale hairs; outer angle of the anterior tibia rather everted, very acute, Length (probably σ) 14.0 mm.; width 6.1 mm. Arizona (Tempe)......liberta n. sp.

Form stouter and much more ventricose, piceous-black and dull or subopaque in lustre, rather more shining beneath; head feebly shining, moderately impressed and strongly, closely punctate, the punctures deeper and more abruptly perforate than in the preceding; antennæ only moderately slender; prothorax transverse, two-fifths wider than long, as in liberta throughout but duller, alutaceous and still more strongly and less sparsely punctate, the punctures toward the sides becoming occasionally almost confluent and rugulose, the dark hispid vestiture still closer, the similarly very abruptly and subvertically reflexed sides not quite so wide and the basal angles more obtuse; elytra one-half (♂) to three-fifths (♀) wider than the prothorax, about three-fifths longer than wide, evenly oval, widest at the middle, with strongly arcuate sides, the apex gradually rather steeply declivous but not very obtuse, the apical lobe small and moderately prominent, obtuse; humeri as in liberta; surface and vestiture similar but much duller, opaque, the discal costa not so elevated and not tending to unite posteriorly with the ramus, which leaves the marginal carina more anteriorly or but little behind the middle;

minute punctures similarly granuliform; abdomen similarly but more closely punctulate and subpubescent; legs rather short and slender, the anterior tibiæ scarcely at all everted and merely acute externally at apex. Length (σ^3, φ) 13.5–14.5 mm.; width 6.3–6.9 mm. Arizona (Tugson),—Wickham. [A sida wickhami Horn].

wickhami Horn

4—Body black, shining; prothorax variolate, longer than in *Euschides marginatus*, the sides subangulate and reflexed, crenulate; base truncate; elytra impunctate, obovate, the suture elevated, flat above, the sides and apex strongly declivous; surface with a very acute costa, which becomes confluent with the marginal carina anteriorly, and, posteriorly, curves toward the suture. Length 18.7–22.5 mm. California (Colorado Desert). [*Pelecyphorus confluens* Lec.].

confluens Lec.

The last species of the table is unknown to me but it appears to be a member of this genus, although confessedly rather aberrant in size and sculpture. The posterior ramus of the marginal carina in *liberta* and *wickhami* is not an inner offset or branch of the carina, but is the inner of two equal branches due to the symmetrical bifurcation of the carina, a rather peculiar structure, not observable elsewhere in the tribe so far as known to me. The *Asida furcata* of Champion, from Durango, Mexico, belongs to this *liberta* group of the genus.

Trichiasida n. gen.

The noticeable distinguishing features of this genus include the more or less pubescent integuments and the moderate or rather small, transverse and obtrapezoidal mentum, mounted upon a long and well developed, deeply sinuate gular peduncle and sometimes leaving much open space between its sides and those of the buccal opening, or in close contact with the latter anteriorly or even dilated anteriorly around their apices as in horrida, the sides of the buccal opening always rather short and broadly obtuse; this variability in the form of the mentum within certain limits has been referred to previously under Euschides. In addition, the antennæ are pale and very slender as a rule, with the tenth joint abruptly wider, conforming to the usual type in European Asida, and the outer angle of the anterior tibiæ is almost invariably everted and acutely spiculiform, the outer edge of the tibia in general somewhat serrulate. There may or may not be a prominent elytral margin and the surface, normally, is devoid of cariniform costæ, though generally having feebly tumescent lines, which, in some groups, become more compressed and elevated, giving the appearance of the true costæ of the two preceding genera; this process of transformation from wave-like tumidity to rather acute costuliform ridges may be traced in various stages in different species. The size of the body is greatly diversified, some being among the smallest of the Asidini, while others are of rather more than the average dimensions. The species are rather numerous but rare individually as a rule. Although there is a certain peculiarity of facies common to all of them, even more pronounced in fact than is observable among the various groups of *Euschides*, there is nevertheless such variety that it becomes necessary to define a considerable number of subgeneric groups as follows:

Base of the prothorax broadly and strongly arcuate. Elytra each with three ridges, the inner feeble, the outer joining the margin near the base; body somewhat depressed, the pale vestiture moderate but coarse, erect and hispid, short, inclined and fulvous on the legs and tarsi, a little longer and dense beneath on the latter somewhat as in Groups I and III......Group V

These groups are in general rather local, although the third, represented by the Mexican *villosa*, is widely diffused from Texas and southern Mexico to Lower California and the second, represented by *acerba*, also occupies a large Sonoran region. It is probable that the Mexican *Stenomorpha subpilosa* Sol., and *Asida pubescens*

and unicostata, and possibly Ologlyptus bicarinatus of Champion, may also belong to this genus. The Asida semilævis of Horn, is appended very doubtfully.

Group I—Type hirsuta Lec.

Two rather isolated species alone constitute this group so far as known. The body is moderate in size and clothed almost throughout, as well as on the legs and upper surface of the tarsi, with very long erect flexible hairs of pale ashy color, the under surface of the tarsi having shorter though relatively somewhat long stiff dense and more fulvous hairs. The mentum is transversely obtrapezoidal and very loosely fitted, the antennæ moderately short and very slender, the prothorax rectilinearly truncate at base with obtuse angles, the elytra devoid of any trace of side margin even at base, the legs moderately long, with the tarsi notably short and slender and with unusually long and slender claws, and the outer edge of the anterior tibiæ is not perceptibly serrulate as it is in the next group. The abdomen from base to apex is much longer than all the parts anterior thereto combined.

Body rather narrow, very convex and subcylindric, blackish-brown in color, the integuments highly polished when clean and without microreticulation; vestiture very conspicuous but not dense, cinereous, fine, composed of very long and sparser flying hairs and others of the same general character but shorter and more recurved, forming vague broad vittæ on the elytra; head scarcely at all impressed, finely, sparsely punctulate; antennæless than one-half longer than the width of the head; eyes very coarsely faceted, transverse, convex, only very feebly sinuate anteriorly; prothorax moderate, two-fifths wider than long, two-thirds as wide as the elytra, parallel, evenly and moderately rounded at the sides throughout the length, the apex feebly sinuate, narrower than the base, with the angles right, not evidently advanced and not blunt, the basal angles obtuse but not rounded; surface moderately and evenly convex, minutely, not densely punctate, rather abruptly, deeply, somewhat narrowly concavoexplanate at the sides, the edges reflexed and rather thin; elytra parallel, widest at the middle, three-fifths longer than wide, very obtuse and steeply declivous behind, the apical lobe small but evident, the sides evenly and moderately arcuate, the base transversely truncate, with the ends of the basal margin finely dentiform, surface of each with three very broad and feeble tumescent lines, bearing the more numerous vitta-forming short hairs, the punctures minute, granuliferous, sparse, still more remote between the vittæ; flanks vertical, only moderately deep; abdomen broad, moder*Hirsuta* seems to be very rare and I have in my cabinet only a single specimen, which is in all probability a female, as the fourth palpal joint is much less than recti-triangular. The long flying hairs on the entire body, and especially on the legs, give it a very peculiar appearance.

Group II—Type acerba Horn.

This group is composed of some of the smallest and by far the most delicate of the American species of the tribe; it is distributed from Utah into northern Mexico and to the westward as far as the Colorado Desert of California. The anterior parts are notably small when compared with the elongate-oval hind body and the latter is as completely devoid of elytral margin as in the first group; the thoracic base is transverse but more evidently arcuate medially than in the latter. The legs are much shorter and very slender, the tarsi relatively longer than in *hirsuta*, very slender and with short, sparser and spinuliform pale hairs beneath, the claws shorter and more arcuate, the anterior tibiæ loosely spinulo-serrate externally. There is considerable diversity in the mentum even within the limits of this rather homogeneous group, this in *acerba* being in close contact with the short obtuse sides of the buccal opening and with a short gular pedestal, while in *tenella* the mentum is mounted on a

notably high pedestal and almost completely clears the still shorter sides of the opening; three species have been discovered thus far.

- 2—Body brownish, subopaque, sparsely clothed with very short erect pubescence, which is yellowish on the head, brownish elsewhere; head sparsely punctate; prothorax one-third broader than long, the apex as wide as the base and feebly sinuate, the sides very regularly arcuate, with the margin feebly reflexed; hind angles obtusely rounded, the base truncate, the surface feebly convex, sparsely and very regularly punctured medially, more densely at the sides; elytra oblong-oval, the humeri broadly rounded, the apex feebly attenuate, the sides rounded, without margin; surface regularly convex, subopaque, sparsely and very finely punctate; under surface subopaque, sparsely and finely punctate; anterior tibiæ denticulate on the outer margin. Length 12.0 mm. Utah (St. George). [Asida acerba Horn.]
- 3—Anterior tibiæ not evidently serrulate externally [cf. Horn, under description of acerba]. Body black, sparsely clothed with short flavate setæ; head punctate; prothorax punctate, sparsely muricate medially, the sides slightly rounded, the margin barely at all reflexed, the base rounded, the angles well marked; elytra sparsely and finely muricate, submargined, oval, the apex acute, strongly declivous. Length 12.5 mm. California (desert along the Colorado River). [Pelecyphorus hispidulus Lec.].....................hispidula Lec.
- Anterior tibiæ evidently but loosely spinulo-serrate externally, the external apical angle much smaller than in acerba but very acute, the flavate setæ longer; elytra sensibly margined at the sides in the male but very obtuse in the female; eyes very convex and prominent; sides of the head before the eyes very prominent in both sexes, extending laterally as far as the eyes; body rather slender, more ventricose in the female, dark brown, subopaque; head feebly impressed, strongly, rather closely punctate, the erect hairs sparse but distinct; prothorax similar in the sexes, fully two-thirds wider than long, parallel and moderately rounded at the sides, straight or subsinuate near the apical angles, which are rather acute but not produced, the apex scarcely narrower than the base, much less deeply sinuate than in acerba; base broadly, feebly arcuate medially, the angles evidently somewhat obtuse but not at all rounded; surface evenly and moderately convex, shining to subopaque throughout, minutely, simply and sparsely punctate medially, with the interspaces extremely minutely and closely punctulate, gradually rather coarsely and closely perforato-punctate laterally, the sides very gradually declivo-explanate, the edge thin and very feebly reflexed; setæ sparse, moderately short; elytra two-fifths (♂) to two-thirds (♀) wider than the prothorax, two-thirds to one-half longer than wide, oblong-ovoidal, somewhat wider posteriorly, convex, subopaque,

obtuse and strongly declivous behind, the apical lobe small but distinct, the sides less arcuate basally, the humeri very obliquely rounded; surface with feeble unduliform ridges, of which the lateral is rather acute and costuliform (\eth^1) or obtusely rounded (\lozenge) , the fine punctures sparse and granuliform, the erect setæ rather long; abdomen opaculate, finely, asperately punctulate, the interspaces very densely and extremely minutely punctulate. Length (\eth^1, \lozenge) 11.0-13.5 mm.; width 4.7-6.2 mm. Arizona,—Leng...tenella n. sp.

The three specimens which I have before me under the name acerba Horn, do not agree very well with the above original diagnosis of the species, the prothorax being more transverse and more densely punctulate than might be inferred; they were collected in southwestern Utah by Weidt and in northwestern Arizona, which is virtually the type locality. LeConte states that the prothorax in hispidula is rounded at base; he certainly would not have used that expression in describing tenella, although there is a broad and feeble arcuation. Mr. Leng informs me that the four examples serving to define the latter species were collected in an unrecorded locality in Arizona, but, as they came from Mr. Joutel, they may be from the neighborhood of Phænix.

Group III—Type villosa Champ.

The general appearance of the three known species of this group is highly distinctive and while there is no other type of the entire tribe that approaches them closely, there is still an unmistakable suggestion of generic alliance with the two preceding groups and it is apparently the proper course to consider them therefore a part of *Trichiasida*. The body is broadly oblong-oval, moderately large, convex and clothed with long thin sparse hairs. The well marked elytral margins were presaged in the male of the *tenella* type of the preceding group, and the mentum and anterior tibiæ are almost as in that type, except that the former is larger and that the short sides of the buccal opening are acute and not obtuse; the tarsi differ in being densely clothed beneath with coarse fulvous pubescence, nearly as in *hirsuta*, but the claws are small and arcuate as in *tenella*. Our species are two in number, occurring in widely separated localities.

Body broad, oblong-oval, convex, dark piceous-brown in color throughout, alutaceous in lustre; head barely at all impressed transversely, finely and sparsely punctate, the sides over the antennæ rounded T. L. Casey, Mem. Col. III, Feb. 1912.

and more prominent than the eyes; prothorax very nearly twice as wide as long, subparallel and strongly arcuate at the sides, which are more converging and less arcuate anteriorly, the apex much narrower than the base, moderately and circularly sinuate, with the angles right, not much produced but not at all blunt; base transverse, the dentiform protuberances acute at tip and projecting behind the edge, separated by nearly half the basal width, the angles very obtuse but distinct; surface strongly convex, strongly declivous posteriorly between the swellings, very feebly impressed on the median line at the centre, very finely, remotely punctulate, each puncture filled by the base of a hair, the sides moderately broadly, deeply concavo-explanate, equal from apex to base and with larger but very sparse punctures, the edge strongly upturned, thin and irregularly, feebly crenulate; scutellum well developed, triangular; elytra evenly oblong-oval, not quite one-half longer than wide, about a fourth wider than the prothorax and between three and four times as long, the sides evenly and moderately arcuate, rounding in rapidly behind, the apical lobe from above small, obtuse and moderately distinct, the basal angles obtuse but distinct; surface more opaque than the pronotum, with very feeble unduliform ridges, minutely, remotely punctulate, the long erect hairs rather stiff, the shorter and more decumbent hairs more numerous but not forming vittæ; side margins acute, unevenly and finely crenulate, feebly elevated near the humeral angles; abdomen finely opaculate, extremely minutely and sparsely punctulate, the hairs fine, pale and very short; legs relatively rather short, slender. Length (♀) 19.0 mm.; width 9.7 mm. Texas......duplex n. sp.

In gibbicollis there is no recorded reference to pubescence of any kind, but, in view of the evident close relationship of the species with duplex and villosa, I think there can be but little doubt, either that this feature was inadvertently omitted or that the type specimens were old and denuded. I have restored its original name, which is not preoccupied in *Trichiasida*. From the Asida villosa of Champion, described from Puebla, Mexico, duplex differs apparently in its sparser vestiture, by the concave margin of the prothorax not being broader toward base, the converging sides apically not sinuate, the anterior angles not so acute or produced and the

abdomen not finely, transversely strigose. The elytra have, similarly, each a tumidity at base opposite the projections of the prothorax, but, in villosa, the outer angle of the anterior tibiæ is said to be blunt; in duplex it is very finely aciculate and spiniform. The figure given on the plate indicates that the elytra in villosa are shorter, being but little longer than wide and that the erect hairs are longer as well as denser than in duplex; no mention is made by Mr. Champion of any other elytral vestiture than the erect hairs, while in duplex the short subrecumbent hairs are rather the more numerous.

Group IV—Type impetrata Horn.

This group includes at present three species. They are rather small in size, convex and black or brown in color, the ridges of the elytra rather obtuse and evidently a more advanced development of the unduliform lines observable in the three preceding groups; they differ from the *hirsuta*, *villosa* and *horrida* groups in the sparser, short and spinuliform black hairs of the tarsal soles, and the anterior tibiæ are much more gradually prominent and acute externally at apex; in the tarsi and mentum they do not differ materially from the second group of the genus.

Body piceous or dark brown in color. Form oblong, the lustre dull; head coarsely, not closely punctate, the occiput and neck densely so: prothorax at least one-half wider than long, widest slightly behind the middle; base not wider than the apex, the latter sinuate, with the angles anteriorly prominent, the sides regularly arcuate, the hind angles rectangular; surface feebly convex, with the lateral margin slightly explanate and slightly reflexed, moderately coarsely, evenly but not densely punctate, along the lateral margin very coarsely punctate, the punctures throughout with extremely short yellow hairs, the lateral edge similarly fimbriate; elytra oblong, twice as long as wide, at base narrower than the prothorax, the humeri very obliquely rounded; marginal ridge nearly attaining the apex; surface very finely and closely punctate, moderately convex and with three costæ, the lateral, beginning at the margin behind the humerus, extending nearly to the apex and sinuous near its end, the second, not quite reaching the base, slightly oblique to the suture and indistinctly joining the outer costa near the apex, the inner faint, joining the second at a fourth from the apex, these costæ and the lateral margin fimbriate at their summits with extremely short hairs; sterna coarsely, not closely punctate; abdomen rather closely and finely, submuricately punctate and with short yellow hairs; legs roughly punctate and slightly hairy. Length 10.5-14.0 mm. California (San Diego). [Asida impetrata Horn].

impetrata Horn.

2—Form rather stout, strongly convex, oblong-oval, rather shining; head broadly and deeply impressed transversely, rather strongly, closely punctate anteriorly, more opaque and minutely, sparsely punctate basally; antennæ rather slender, black, the joints eight to ten gradually wider; prothorax fully three-fourths wider than its median length, widest behind the middle but with the sides very evenly and moderately arcuate; apex much narrower than the base, very deeply sinuate, the angles slightly blunt at tip; base transverse, very feebly and broadly sinuate at each side, the angles slightly obtuse and blunt; surface evenly and moderately convex, subopaque, minutely, rather sparsely punctate, with a feebly defined impunctate line, the punctures gradually becoming stronger but not notably coarse and still sparse laterally, the sides abruptly and very steeply reflexed, the reflexed part flat, coarsely, subrugosely punctate, the edge thin, the pubescence fulvous and minute throughout, subdecumbent; scutellum moderate; elytra virtually glabrous, oblong-oval, parallel, broadly and evenly rounded at the sides, two-thirds longer than wide, two-fifths to one-half wider than the prothorax, the apical lobe very protuberant and narrowly parabolic; surface decidedly shining, unevenly creased and subrugose, very minutely, sparsely, subgranularly punctulate, the suture but feebly tumescent, the first two ridges obsolescent basally, uniting at apical fifth and thence continued posteriorly for a short distance as a single feeble ridge, the third extending from the margin near the base to apical sixth, free at the end, the margin obtusely costate and unevenly, granularly rugose; humeri obliquely rounded; abdomen alutaceous, minutely, sparsely, asperulately punctulate; legs short, slender, with short stiff black hairs. Length 12.8-13.2 mm.; width 6.6-6.8 mm. Arizona (Huachuca Mts.)....ignava n. sp.

Form more slender, similarly convex but more opaque and with more distinct fulvous hairs; head and antennæ nearly similar but with the punctures smaller, feebler and sparser, though extending posteriorly to the vertex; prothorax similar, except that the small punctures are more distinct and rather closer, becoming much coarser and closer laterally, without evident impunctate line and the fulvous hairs longer and much more conspicuous, the sides similar but with the steep flat reflexed part relatively even higher, the edge thicker; elytra narrower and more elongate-oval, with more arcuate sides, opaque, otherwise similar, except that the surface is more evidently though minutely fulvo-pubescent, the ridges narrower at their summits and less widely separated, and that the first joins the third at apical seventh, the second abbreviated and free at the end or sometimes tending to join the first; abdomen more shining, the minute punctulation sparser; legs very slender but relatively a little longer. Length 11.5 mm.; width 5.7 mm. Arizona (locality unrecorded).

impotens n. sp.

There are doubtless a number of other species of this group in southern Arizona and northwestern Mexico.

Group V—Type horrida Champ.

As before stated this group is peculiar in having the basal part of the mentum in close contact with the obtusely rounded and rather short sides of the buccal opening and dilated apically, partially enveloping these projections; but the gular pedestal, though shorter, is well developed and, at each of its ends, there is a rather large subcircular opening. The body is flatter above than in the preceding group, larger in size, much more coarsely sculptured and distinctly pubescent, the antennæ slender though rather gradually enlarged through joints eight to ten; the eyes are more coarsely faceted and the sides before them are less laterally prominent, less rounded and, anteriorly, are somewhat angulate in a way quite foreign to any of the preceding groups; the elytral ridges are low, subobtuse and are coarsely granulo-tuberculate along their summits. The external apical angle of the anterior tibiæ is abruptly produced, long, spiniform and finely aciculate, the outer edge strongly spinulo-serrate, and the tarsi densely fulvopubescent beneath.

Body oblong-oval, opaculate, dark chocolate-brown in color throughout, the vestiture pale fulvous-yellow; head rather small, scarcely impressed, coarsely and closely punctate; prothorax fully one-half wider than long, the apex much narrower than the base, moderately sinuate, the angles acute; sides rather strongly rounded, more convergent and less arcuate anteriorly; basal angles obtuse but rendered distinct by the small adjacent sinuses of the base, the latter evenly rounded; surface coarsely, rather closely punctate, strongly convex, abruptly rather widely concavo-explanate at the sides, the edge almost vertically reflexed, moderately thin and granulo-crenulate; pubescence rather short and very stiff; elytra barely one-half longer than wide, between a third and fourth wider than the prothorax, obtuse behind, the apical lobe obtuse but distinct; sides parallel, nearly straight, obliquely rounding and reflexed to the very obtuse and blunt basal angles, the thickened costuliform side margin bifurcating slightly behind the humeri and continuing nearly to the apex, the other two discal ridges moderate, the inner feeble and obtusely blunt, both extending from the base to apical fifth, where they unite, the single feeble resulting line extending nearly to the apical angles, crossing and uniting the ends of the two outer ridges, the surface sparsely, unevenly granular and punctate, the larger granules bearing rather short but stiff erect setæ, the smaller and more simple punctures bearing the subdecumbent stiff and peculiarly arcuate but no shorter pale hairs; abdomen coarsely, closely, asperately punctate and with very small and fine pale subdecumbent hairs; legs rather short and slender, subcylindric, the tibiæ and tarsi

densely clothed with inclined stiff hairs. Length (♂,♀) 15.0–16.0 mm.; width 7.7–8.0 mm. Texas. [Asida horrida Champ.]. horrida Champ.

The specimens described by Champion came from Nuevo Laredo, just across the Rio Grande from Laredo, Texas, and I have but little doubt that these Texan examples represent the same species, although there seem to be a few discordances and I do not know that they were taken anywhere near Laredo. The erect hairs of the elytra, for example, are said to be long in the Mexican types, while in those above described they are very short, no longer in fact than the curly decumbent hairs; the figure given on the plate is slightly too slender for the Texan form.

The following species is appended to *Trichiasida* with many doubts. The arrangement of the elytral costæ is exactly that characterizing this genus, but the sinuation of the sides of the prothorax toward base is a character quite at variance with anything hitherto observed, and the author makes no reference to pubescence of any kind, this being present, at least in some form, in all the other species:

This species is apparently still represented by the unique type, collected by Mr. W. M. Gabb.

Platasida n. gen.

The type of this genus is a very peculiar and isolated species, recently described from Lower California. The very widely reflexed or flattened margins of the prothorax are remindful of one of the more conspicuous characters in the Blaptid genus *Embaphion*.

It is possible that the *Ologlyptus planatus* of Champion, may also belong to this genus or that it is closely related.

Form rather slender and graceful, dull brown, the suture and two lines on each elytron faintly paler; head coarsely and closely punctate; prothorax more than one-half wider than long, slightly narrower between the basal than the apical angles; apex deeply sinuate, the base bisinuate, the sides regularly arcuate; surface flat, the margin broad and widely reflexed, the edge slightly crenulate and with short hairs; punctures sparse, each with a short hair; elytra less than twice as long as wide, widest at the middle, the humeri very oblique, the lateral margins sharp and slightly reflexed, suddenly incurved at apical fourth, thence oblique nearly to the apex; surface nearly flat transversely and having sparse erect spinules of peculiar structure, they being pectinate on two edges as in the tibial spurs of Prionochata; prosternum sparsely punctate, with short and erect hairs, the propleura more coarsely punctate; abdomen finely and sparsely punctate and with short erect spinules; legs roughly punctate and with short hairs. Length 15.0 mm. Lower California (San José del Cabo. [Asida embaphionides Horn].....embaphionides Horn

Form more slender, the sides of the elytra more reflexed and forming a lobe-like projection on the declivity, very slender and elongate, dark castaneous, feebly shining and with short sparse fulvous hairs, the elytra with short and scattered erect black setæ; head very coarsely and roughly punctured, the neck more finely and densely as usual; prothorax slightly wider than long, the apex deeply sinuate, the sides rather strongly arcuate, very slightly sinuate posteriorly, the base feebly bisinuate, the hind angles right; surface flat medially, coarsely punctate at the sides, which are widely reflexed; elytra slightly wider than the prothorax and about three times as long, the surface rather flat, rapidly declivous posteriorly, the side margin acute, not widely reflexed, terminating at the declivity in a lobe-like process, sparsely and indistinctly punctate, each puncture with a fulvous [previously said to be black] hair or short spine; deflexed sides sparsely spiculose; under surface sparsely punctate and with very short erect spinules; prosternum concave between the coxæ; legs slender, clothed with short hairs, the outer apical angle of the front tibiæ slightly prolonged. Length 13.5 mm. Lower California (San José del Cabo). [Asida flaccida Horn].

flaccida Horn

Although Dr. Horn surmised that *flaccida* might be the male of *embaphionides*, I am not convinced, on studying the very good figures of these species, that they are even congeneric, but if not a *Platasida*, there is no other place for *flaccida* among the genera here recognized. The elytral setæ appear to be simple in *flaccida*, or, at any rate, nothing to the contrary is stated and this, together with the basally sinuate sides of the prothorax, would alone show

that it cannot be in any way closely related to *embaphionides*; a corresponding difference in the form of the elytral setæ in generically related species has, however, been previously noted under *Heterasida*. The absence of actual specimens of either of these two very interesting species, renders it impossible for me to give any structural generic characters relating to the mouth-parts, antennæ or tarsi.

Litasida n. gen.

The single type of this genus greatly resembles *polita* of the next. in being deep black, oblong-oval, smooth, and evenly convex and the mentum is similarly notably small, obtrapezoidal, separated from the narrowly rounded, moderately prominent sides of the buccal opening by wide vacant intervals, the gular pedestal high, rather narrow and sinuate and the ligula large tumid and nonretractile. But, as an exception to all other types in this part of the series, the trochantin is obsolete, the sterna separated merely by a cleft, and the elytra are but narrowly inflexed beneath as in Microschatia. The eyes and antennæ are nearly as in the following genus, but the latter are distinguished from anything else in the tribe by a sexual modification of the sixth joint in the male, where this joint is distinctly though not greatly wider than either of those adjoining it; the apical part is gradually enlarged through joints eight to ten. The labrum is but slightly transverse, with a small deep apical sinus between two unusually prominent and narrowly rounded lobes. The legs are rather short and moderately slender. except the tarsi which are unusually long, the intermediate in the male somewhat longer than the tibiæ and the posterior four-fifths as long; the tibiæ as well as the under surface of the tarsi have sparse and short pale spinuliform inclined hairs; the claws are rather long, feebly arcuate and distinctly compressed. The type of this rather isolated genus is the following:

Body oblong-oval, evenly and moderately convex, glabrous, deep black throughout and somewhat opaque; head feebly impressed transversely, opaque, minutely, indistinctly punctulate, the epistoma more shining and with distinct but sparse punctures; antennæ rather stout, black, extending (3) almost to the thoracic base; prothorax three-fifths wider than long, scarcely narrower than the elytra, much narrowed anteriorly from the middle, the apex scarcely two-thirds as wide as the base, deeply sinuate, the angles blunt; base transverse, posteriorly oblique at each side, the angles right, formed entirely

by the strongly reflexed sides, which are narrow anteriorly, becoming very broad basally, the edge thick, perfectly even and finely punctate; sides becoming parallel and feebly arcuate behind the middle; surface broadly, evenly convex, very finely and rather sparsely punctulate, the steeply reflexed sides coarsely, subrugosely punctate; scutellum short, very broadly angulate; elytra three-fifths longer than wide, gradually evenly and obtusely ogival and gradually moderately declivous behind, without apical lobe from above, parallel, the sides feebly arcuate, the side margin narrowly and strongly reflexed, becoming very much elevated toward the basal angles, which are covered by the thoracic angles; posteriorly the margin is even and continuous to the apical angles; surface nearly smooth, evenly convex, minutely and sparsely punctulate; abdomen more shining, finely, sparsely punctate; epipleura becoming narrow and concave at the elytral apex. Length (3) 12.5 mm.; width 6.2 mm. Mexico (Colonia Garcia, Chihuahua),—C. H. T. Townsend......*townsendi n. sp.

The prosternum is feebly concave between the coxæ, gradually strongly declivous posteriorly, descending vertically upon the anterior margin of the mesosternum.

Asidopsis n. gen.

This genus is a large one and somewhat composite in external facies, but the species hold together in many important characters, showing that they constitute a true genus and not one or more arbitrary sections of Asida. The body is generally stout and oblong-oval but may be slender, as in macra, usually convex but sometimes almost flat above, as in some of the opaca group and in planata which is provisionally included, always glabrous or virtually The mentum is more or less small, obtrapezoidal, leaving a vacancy between its sides and those of the buccal opening, which becomes wide in some of the polita group, the gular support rather narrow, high and sinuate, the ligula swollen, angularly incised and non-retractile, the eyes of the usual type in this part of the series, having the anterior margin faintly sinuate, and the labrum is narrowly sinuate at tip and moderately transverse. The antennæ are more or less stout, gradually broadening through joints eight to ten, black, setose and not much compressed except apically. The legs are moderate in length, slender, with the usual small stiff hairs, the tarsi rather long, slender, much longer in the male than in the female in the quadricollis group, more or less minutely

spinulo-setose beneath, the anterior tibiæ in general gradually and feebly everted and acute externally at apex. The trochantin is distinct and the elytra widely embrace the sides of the body, as in all our genera excepting *Litasida* and the *Microschatia* section, and may or may not have an acute or cariniform margin as in *Euschides*. The prosternum between the coxæ is more like that of *Pelecyphorus* than the *Euschides* type, being rather gradually declivous behind and extending somewhat onto the anterior part of the mesosternum.

The groups, some of which are subgeneric, are five in number as known at present; they may be defined by the following general characters:

3—Elytra feebly convex, each with three lines of wrinkles, which are transversely united by intervening reticulations..........Group III

All of these groups inhabit the southern Rocky Mountain system and its easterly extensions, excepting the last, which is confined to Lower California.

Group I—Type quadricollis Horn.

At first glance it would almost seem that this group should constitute a separate genus, the form of the body is so distinctive, but on closer observation it can readily be seen that it is closely affiliated with the following *polita* group, and through that to *opaca*

and allied species, forming the fourth group; so there is an evident interrelationship, as remarked by Dr. Horn in his paper on the Coleoptera of Baja California.

the humeri, at base much wider than the thoracic base.....4 3—Body very slender and convex, shining; head feebly impressed, coarsely, densely and coalescently punctate; antennæ well developed; prothorax very nearly as long as wide, the apex very evidently narrower than the base, deeply, circularly sinuate, the angles anteriorly prominent, very acute and subeverted; base transverse, broadly, feebly sinuate laterally, the angles very acute and obliquely prominent; sides feebly arcuate, broadly sinuate toward the basal and less distinctly near the apical angles; surface evenly convex, only moderately finely, sparsely and strongly punctate, becoming gradually declivo-explanate and coarsely and confluently so laterally, the edge not very thin, not obviously reflexed and rugose; scutellum small; elytra nearly four-fifths longer than wide, three-fifths wider than the prothorax, oval, at base not wider than the thoracic base, widest at the middle, the sides strongly rounded, straight and moderately converging basally, more rapidly converging apically, the apical lobe large but feebly differentiated, the humeral angles slightly obtuse but not at all blunt and minutely, feebly reflexed; surface deeply, rugosely creased, evenly, strongly convex, even though with some broadly obtuse vestigial lines, the punctures minute and sparse; abdomen convex, shining, strongly creased and subscabrous, asperately punctate apically, the prosternum coarsely and closely punctate to the sides. Length (9) 14.2 mm.; width New Mexico (Magdalena),—F. H. Snow. macra Horn].....macra Horn

Body shorter and more ventricose, the surface smoother; head subopaque, feebly impressed, rather coarsely punctate, the punctures perforate and moderately well separated; prothorax nearly as long as wide, more quadrate, the apex but just visibly narrower than the base, otherwise similar, except that the punctures on the declivoexplanate lateral part are not quite so coarse, more perforate and close though much less coalescent; elytra scarcely two-thirds longer than wide, four-fifths wider than the prothorax, the base evidently wider than the thoracic base, more depressed or nearly flat gradually toward the suture, the sides more strongly arcuate, the apical lobe produced and acutely ogival but scarcely at all differentiated; surface smoother, more feebly, very irregularly and closely creased, very minutely and sparsely punctulate, each with obsolete vestiges of two fine discal costules, the humeri right, not blunt, the apex of the angle thickened, notably reflexed and laterally exposed; abdomen shining, very finely subrugulose and with very feeble scattered asperulations, the last two segments asperately punctate, with the interspaces minutely, closely punctulate; prosternum much less closely and less coarsely punctate throughout than in ma.ra. Length (\bigcirc) 13.0–15.0 mm.; width 5.4–6.9 mm. Texas.

eximia n. sp.

4—Reflexed sides of the elytra very short, not extending from the humeri a distance greater than a fourth the length of the prothorax, broadly rounded externally and auriculiform. Form elongate, the surface strongly shining; head strongly impressed, coarsely, moderately closely punctate, gradually more finely so posteriorly; antennæ longer than usual, attaining the base of the prothorax (σ^{1}) or shorter (9); prothorax scarcely a fifth wider than long, parallel, the sides evenly and moderately arcuate to the apical angles, which are but little produced and blunt, straight or subsinuate toward the basal angles; apex sensibly narrower than the base, strongly, evenly sinuate, the base transverse, broadly, very feebly bisinuate, the angles right and very sharp, sometimes minutely everted; surface evenly and moderately convex, minutely, sparsely punctate, gradually rather broadly but feebly concavo-explanate and coarsely, confluently punctate laterally, the edge thin; scutellum moderate, triangular; elytra fully two-thirds longer than wide, one-half wider than the prothorax, at base also wider than the latter, widest at the middle, the sides straighter and feebly converging thence to the base. strongly rounded and gradually rapidly converging posteriorly to the subacute apex; surface flattened or feebly concave suturally, smooth, confusedly and distinctly creased and finely, sparsely punctate; abdomen nearly smooth, very minutely sculptured; propleura asperato-rugulose, the prosternum smooth, finely, sparsely, asperulately punctate. Length (9) 13.5-14.0 mm.; width 6.0-6.3 mm. New Mexico.—Gissler. [Asida quadricollis Horn].

quadricollis Horn

5—Prothorax relatively very small, the hind tarsi very slender and filiform, much longer in the male than in the female. Form rather stout; head rather strongly impressed and also with a small impression on the vertex, strongly, rather closely punctate throughout; antennæ shorter than in *quadricollis*, not extending to the thoracic base even in the male; prothorax a fourth or fifth wider than long, parallel, the sides evenly but very moderately arcuate to the apical angles, which are moderately advanced, acute and never more than slightly blunt, not more than straight basally, the angles right or slightly more, not prominent but sharp; apex very distinctly nar-

rower than the base, deeply sinuate, the transverse base just visibly and broadly bisinuate; surface moderately convex, very finely, sparsely punctate becoming gradually deplanate (o) or concavodeplanate (9) and coarsely, densely punctate laterally; apical and basal margins narrowly, closely and rather strongly punctate throughout the width; scutellum small (\eth) or well developed (\lozenge) , equilatero-triangular; elytra short, barely one-half longer than wide. three-fifths to three-fourths wider than the prothorax, also wider than the latter basally, broadly rather depressed suturally, widest at the middle, rapidly acuminate behind, the sides strongly arcuate, less so basally, the marginal carina very strongly, subvertically reflexed basally, gradually more feebly thence posteriorly, disappearing at basal sixth to medially (3) or at about basal fourth (2), the surface smooth, sometimes feebly creased, sparsely, very minutely punctate; abdomen nearly smooth, the punctulation scarcely visible, the punctures small and sparse but distinct apically; propleura not or scarcely rugulose, minutely, sparsely and asperulately punctate, the prosternum almost similarly or more finely so. Length (\vec{O}) 11.0-12.0, (?) 14.0 mm.; width (\vec{O}) 5.2-5.9, (?)6.7-7.0 mm. Arizona (Huachuca Mts.)....cochisensis n. sp.

Prothorax even smaller than in cochisensis, the tarsi similarly very slender, the posterior slightly longer than in the female of that species. Form (9) less stout, deep black and much less shining, in fact very nearly as opaque as in pinalica, the head somewhat feebly impressed, densely opaque, only moderately punctate; prothorax very slightly wider than long, nearly as in cochisensis, except that the sides are rather less broadly concave and less strongly punctured. the reflexed edge thinner and the apex less deeply sinuate; elytra fully two-thirds longer than wide and fully three-fourths wider than the prothorax, the oblique sides in apical two-fifths much more gradually converging and nearly straight to the more acute apex, in basal two-fifths moderately converging and feebly arcuate, the reflexed edge extending between a fifth and sixth from the bluntly rounded humeral angles; surface nearly as in cochisensis though opaque and with the punctures much less minute but extremely feeble; abdomen nearly similar, the last segment more narrowly rounded. Length (9) 14.5 mm.; width 6.4 mm. Arizona (Huachuca Mts.),—Chas. Schaeffer.....gracilipes n. sp.

Prothorax quadrate, relatively much larger; hind tarsi much stouter than in cochisensis or gracilipes. Form nearly similar but less ventricose; head nearly similar, the punctures not quite so coarse, well separated; antennæ nearly similar; prothorax slightly wider than long—counting the medial length as usual, for the sides are as long as the width;—sides parallel and only very slightly arcuate, continuing equally so to the apical and basal angles, the former blunt but advanced, the latter somewhat more than right but sharp, not prominent; apex but just visibly narrower than the base, deeply sinuate; base almost rectilinearly truncate; surface nearly as in cochisensis but more alutaceous or subopaque, the minute punctures

6—Form rather stouter than usual, opaque; head impressed transversely, deeply, rather coarsely and densely punctate, less coarsely but still perforately on the vertex; antennæ moderate; prothorax not quite as long as wide, the apex distinctly narrower than the base, deeply, evenly sinuate, the angles advanced and finely acute; sides broadly angulate at the middle, thence converging and straight to the apex anteriorly and parallel to feebly converging and straight to subsinuate to the basal angles, which are slightly less than right, sharp, more or less prominent, the base being very feebly bisinuate, becoming feebly posteriorly oblique laterally; punctures deep and perforate, small and moderately sparse, becoming gradually coarse and more or less dense toward the sides; median parts evenly and moderately convex, gradually and rather widely concavo-explanate laterally, the edge somewhat sharply though moderately reflexed and thin; scutellum small, equilatero-triangular; elytra three-fifths longer than wide, one-half to two-thirds wider than the prothorax, gradually very moderately declivous and obliquely acuminate posteriorly, the parabolic apical lobe rather prominent; sides strongly arcuate to the humeri, which are very obtuse with their edge rather finely and very faintly reflexed; surface broadly convex, sometimes flattened suturally, smooth, with faint creases, minute and sparse punctulation and generally with two fine and very faint vestigial costules on each, the sides obtusely rounded in section except at the humeri; under surface piceous, the abdomen rather shining and with fine and feeble sparse asperities; legs moderately long, very slender. Length $(\emptyset^1, \mathcal{P})$ 13.5-16.0 mm.; width 5.8-8.0 mm. Arizona (Pinal Mts.),—Wickham.....pinalica n. sp.

The species above identified from the female as *macra* Horn, satisfies the original description and was taken in New Mexico by the same collector; it undoubtedly represents that species and, assuming this to be so, shows that the figure given by Dr. Horn is decidedly out of proportion, being much too stout and ventricose. The type of *quadricollis* is also a male, but I have only females in my

cabinet, which prevents me from confirming the very exceptional length of the antennæ ascribed to it by its author. Of *cochisensis* there is before me a very good series of seven males and three females and two notable facts regarding it become thereby apparent, the first being the very great variation in the posterior extension of the reflexed elytral margin in the males and the equally striking constancy in the length of this sharply upturned margin in the female, and the second being the evident and very constant disparity in the size of the sexes. There is very little variability otherwise as far as noted.

Adhering to one of the examples of *cochisensis* is a very regularly elongate-oboval pale yellowish mite, of convex form and highly polished even surface; it is proportionally of very large size, being about 0.78 mm. in length. A specimen of *Phellopsis porcata*, in my collection, bears a number of pale mites which are of a totally different form, being narrowly oblong and parallel, very flat, with the legs longer and protruding for some distance at the sides, the body crossed at the middle by a very fine suture differentiating the abdomen, the small head partially visible; its size is much smaller, being scarcely 0.28 mm. in length. From what I have very casually seen of these mites infesting beetles, they are remarkably diversified and would form a life-long study in themselves.

Group II—Type polita Say.

In spite of the very different habitus of this group, due to the stout oblong convex body and transverse prothorax nearly as wide as the elytra, there are no structural characters of moment affecting special organs to distinguish it from the preceding group, excepting the basal angles of the prothorax, which however isolate it conspicuously in the genus; these angles are always obtuse and more or less blunt. The species are mutually so similar that it may be said of all of them that the prothorax is much narrower at apex than at base, the apex circularly and rather deeply sinuate, the base broadly, feebly arcuate, becoming transverse and very feebly sinuate laterally, the hind angles not quite so posterior as the median arcuate part of the base. The elytra are always evenly convex at the sides, becoming acutely carinate and reflexed uniformly in basal fifth to sixth; the elytral base is broadly, feebly sinuate.

the humeral angles nearly right and always well marked. The group is more northern and eastern in distribution than the preceding.

Elytral punctures small to very small and always well separated, the surface even or very nearly; prothorax widest behind the middle..2

Elytral punctures decidedly coarse and dense, the surface of each with three broadly convex, unduliform and feebly defined ridges, separated by sinuous crease-like lines; prothorax widest at the middle...4

2—Sides of the prothorax rather abruptly strongly converging anteriorly in more than apical half and nearly straight. Form oblong-ovoidal, convex, black, the under surface and sides of the pronotum piceous: head rather shining, deeply impressed transversely, strongly but not very coarsely or closely punctate; prothorax three-fifths wider than the median length, the apical angles very acute and the apex scarcely two-thirds as wide as the base, the sides becoming moderately arcuate and parallel behind the middle; surface opaculate, rather strongly, evenly convex, very finely, rather sparsely punctate, somewhat narrowly and abruptly, deeply concave and coarsely rugose laterally, the margin strongly reflexed, finely punctate, becoming gradually much thicker basally; scutellum well developed, triangular, twice as wide as long; elytra large, fully one-half longer than wide, widest at the middle, a fourth wider than the prothorax, broadly and feebly convex, gradually strongly so laterally and apically, rather shining, closely, somewhat deeply, intricately creased and finely though very distinctly but not closely punctate; apex obtuse, the apical lobe small but distinct, the sides parallel and arcuate; abdomen minutely, vermicularly creased, smoother and with distinct punctures posteriorly; prosternum and propleura smooth, extremely minutely and sparsely punctulate. Length (2) 16.0 mm.; width 8.0 mm. The label states that the single type was collected by Schaupp in California, but this locality may be regarded as doubtful. consentanea n. sp.

Sides of the prothorax evenly and moderately converging from base to apex, evenly and feebly arcuate throughout. Body deep black, the elytra strongly shining; head transversely and rather sharply impressed, strongly, loosely punctate, the vertex finely and sparsely; prothorax less transverse than in *polita* and with very much less arcuate sides, scarcely three-fifths wider than long, the apex rather more than two-thirds as wide as the base, deeply sinuate with prominent angles; surface alutaceous, very finely, sparsely punctate, deeply, rather narrowly concave and sparsely punctate at the sides; elytra at the middle scarcely a third wider than the prothorax, nearly one-half longer than wide, the parallel sides broadly rounded, reflexed and thickened at base as usual, gradually more converging posteriorly to the strongly rounded and prominent apical lobe, the surface creased, each with three vestigial lines, the inner from the middle of the base gradually approaching the suture posteriorly, the

3—Sides of the prothorax strongly arcuate. Form broad, oblong-oval, more ventricose in the female; head very moderately impressed, less coarsely and closely punctate than in consentanea; prothorax nearly two-thirds wider than long, convex, minutely and sparsely punctulate, shining to opaculate, the rather narrow but deeply concave sides not rugose but only moderately strongly and sparsely punctate, the strongly reflexed edge rather thin, convex transversely and minutely punctate throughout the length; apical angles frequently rather blunt; elytra shorter, scarcely more than a third longer than wide, but very little (\mathcal{O}) to a fourth (\mathcal{O}) wider than the prothorax, obtuse behind, the apical lobe extremely short and undifferentiated; sides parallel and evenly arcuate; surface shining, sometimes alutaceous in the female, minutely and irregularly creased and finely, sparsely punctate; under surface rufo-piceous to deep black, shining, the abdomen nearly smooth, punctate apically; prosternum and propleura smooth and very minutely, remotely punctulate, the meso- and metapleura granose, the latter very feebly however; tarsi very slender. Length (♂, ♀) 12.0-15.0 mm.; width 6.6-8.0 mm. Kansas and Nebraska. [Asida polita Say].

polita Say

- A—Body broad, oblong-oval, moderately convex, deep black throughout; head moderately impressed, sparsely punctate, gradually rather strongly so anteriorly; antennæ gradually slender basally; prothorax short, nearly three-fourths wider than long, the apex fully three-fourths as wide as the base, the angles right and not very blunt; sides evenly, rather strongly arcuate from base to apex, nearly as in *polita* throughout but opaque and with a feeble transverse impression at each side before the base; edges strongly reflexed, rather thin but becoming thick near the basal angles; elytra very short, only little more than a fourth longer than wide, rapidly narrowing behind, the lobe broad and moderately defined, widest slightly behind the middle, the sides broadly arcuate, very feebly converging and straight from the middle to the humeral angles, less than a fourth wider than the prothorax; surface broadly, feebly convex above, opaque, minutely and intricately creased, with patches of finer reticulation, the small punctures very feebly impressed; each elytron with vestiges of three broad and slightly more convex vittæ; side margins rather acute as far as the middle but reflexed as usual only near the base; under surface and legs as usual; tarsi very slender. Length (♂) 12.0 mm.; width 6.4 mm. Kansas.....subopaca n. subsp.
- B—Body narrower and more parallel than in any other species, opaque, the anterior parts alutaceous, the under surface rufo-
 - T. L. Casey, Mem. Col. III, March, 1912.

piceous and shining, deep black above; head rather narrowly and deeply impressed transversely, somewhat strongly punctate, closely so anteriorly; antennæ slender; prothorax scarcely threefifths wider than long, the apex more than two-thirds as wide as the base, deeply sinuate, the angles acute and very sharp, not at all blunt; sides evenly and rather strongly arcuate, the converging sides anteriorly straight; surface nearly as in polita but duller, the concave side margins more shallow and more punctate, the edge rather thin throughout; scutellum wider than long; elytra one-half longer than wide, less than a fifth wider than the prothorax, less rapidly narrowed at apex than in subopaca and with the more acute apical lobe still less differentiated, widest at the middle, the sides parallel and evenly, rather feebly arcuate to the base, the lateral edges subacute nearly to apical fourth, the humeral reflexed margin thinner than in subopaca; surface much more convex throughout the width, opaque, very minutely and reticularly creased in small denser and sparser patches, the punctures larger than in *polita* but more feebly impressed; each elytron with traces of three very feeble costules, the inner rather distinct, posteriorly uniting with the second on the declivity and the common line thus formed indicating union with the end of the third costule, which however is not traceable at any other point; abdomen nearly smooth, polished, punctate apically; tarsi very slender, the legs picescent. Length (3) 12.0 mm.; width 5.75 mm. Kansas (Wallace Co.),—Warren Knaus....futilis n. subsp.

4—Form stout, convex, oblong, deep black throughout; head shining, broadly and feebly impressed transversely, rather strongly, moderately closely punctate; prothorax one-half wider than long, the sides rounded at the middle, thence converging and but feebly arcuate apically and just visibly converging and nearly straight basally, the basal angles right and narrowly rounded, the apical moderately acute; surface shining, convex, minutely, sparsely punctulate, the marginal concavity narrower apically than basally, sparsely and more distinctly punctate, the edge reflexed, notably thick, densely and strongly punctate; median line very feebly impressed toward base; elytra about a third longer than wide, nearly a fourth wider than the prothorax, very obtuse behind, the small apical lobe short but distinct; sides parallel and evenly arcuate; surface strongly convex, but feebly shining, densely rugose and with rather close-set punctures, which are larger than usual; abdomen shining, smooth, very minutely punctulate, gradually more closely and strongly so posteriorly. Length (5) 13.8 mm.; width 7.0 mm. Wyoming (Saratoga)......dolosa n. sp.

The three vestigial costules sometimes traceable and described in more detail under *futilis*, by their number and arrangement, the outer joining the side margin near the base, indicate a certain consanguinity between this genus and *Trichiasida*, a fact, however, that might be inferred as well from their general morphology.

These costules are sometimes feebly traceable also in the quadricollis group, but they never appear in the opaca group, where the basal angles of the prothorax assume a different form, being obliquely prominent and acute. It is apparent, however, that the quadricollis and polita groups are better considered a section of Asidopsis, having as its type opaca, than as a part of Trichiasida. These three costules moreover, arranged as stated, appear also in very visible form in the puncticollis group of Euschides and elsewhere, and in fact characterize a large part of the American Asidini, so that they alone are not of any great weight in determining the limits of individual genera.

Group III—Type mancipata Horn.

Not having a representative of *mancipata* at hand, it is impracticable for me to give any useful information concerning this group, of which I can only repeat the few characters published by Dr. Horn.

In the remarks following the original description it is stated that the male is more slender than the female, with the elytra feebly convex, the female stouter, with the elytra more convex but depressed along the suture.

Group IV—Type opaca Say.

This group is more diversified in habitus and structure than the *polita* group, though perhaps somewhat less so than the *quadricollis* group. The body is densely opaque, and lustreless in the great majority of species, but in at least one is strongly shining, and the side margins of the elytra are by no means constant. The *opaca*

group is rather more widely diffused in geographic range than the preceding, inhabiting the Rocky Mountains from Montana to southern New Mexico and eastward well into Kansas and Texas.

Side margins of the elytra very unstable in extent at least in the male, acute but reflexed only at the humeral angles, becoming obtuse or lost in some examples even before the middle, but in others extending fully to apical sixth, in the female extending to about apical fourth; body deep black and in great part shining above and beneath. rather narrow and notably convex, broader and less convex in the female; head opaque, strongly impressed transversely, coarsely and closely punctate, the punctures very dense and asperate on the vertex, each with a minute slender hair, the vertex impressed medially as a rule; antennæ stout, much compressed throughout; prothorax almost as in opaca, nearly one-half wider than long, the apex deeply sinuate, two-thirds to three-fourths as wide as the base, the latter broadly bisinuate, posteriorly oblique laterally, equal in width to the elytral base, the apical angles acute, slightly blunt at tip, the basal strongly and obliquely acute; sides broadly arcuate, broadly sinuate basally; surface alutaceous, coarsely, densely punctate, the punctures granose at their anterior margins and very irregularly condensed, leaving impunctate spots, the sides broadly, feebly concave basally, more narrowly so anteriorly, the moderately reflexed edges rather thick, densely punctate; elytra three-fifths (♀) to three-fourths (σ) longer than wide, only just visibly wider than the prothorax (\emptyset^1) to one-third wider (\mathcal{P}) , convex, strongly shining, deeply and very confusedly rugose, with large uneven indentations and coarsely but not deeply punctate, each puncture with an anterior asperity, the surface irregular, having generally about four narrow and close-set longitudinal ridges, which are feeble, very irregular and more visible inwardly; abdomen shining, with fine and feebly asperulate punctulation, punctate posteriorly; legs slender. Length (♂, ♀) 13.0-15.0 mm.; width 5.8-7.2 mm. New Mexico (Fort Wingate). nitidula n. sp.

Side margins of the elytra feebly cariniform and rather constant, always extending to about the summit of the apical slope. Form stouter than in nitidula and larger in size, similarly deep black throughout but more opaque, the elytra not so shining, similarly convex; head nearly similar but rather less densely and strongly punctured, the antennæ distinctly longer; prothorax larger, the sides gradually feebly converging from base to apex, similarly sigmoid, rounding anteriorly, broadly sinuate basally, the basal angles obliquely acute and prominent; surface but very feebly convex, opaque, coarsely, very densely punctate, rather more broadly and less strongly concavo-explanate at the sides, the punctures not evidently granuliferous; elytra barely more than one-half longer than wide, at base as wide as the total thoracic base to slightly wider, just visibly widest behind the middle, the sides very feebly arcuate, rounding behind to the large and conspicuous apical lobe, dis-

tinctly convex, feebly shining, very irregularly, sublinearly sculptured nearly as in nitidula, but on the whole less strongly, the punctures rather coarse, rugose, coalescent, not well defined and minutely granuliferous, though not as strongly so as in that species; abdomen shining, minutely, sparsely punctulate. Length (♂,♀) 13.5-16.8 mm.; width 6.0-7.7 mm. New Mexico (Jemez Springs), —John Woodgatei n. sp. Side margins more stable and cariniform, extending almost to the apical angles; body in great part opaque, generally broader and less convex, the elytra more minutely, sparsely and more or less asperately or subgranularly punctulate.....2 2—Elytra feebly or very moderately though evidently convex......3 3—Prothorax never very much narrower than the elytra, at base fully as wide as the elytral base and sometimes a little wider.....4 4—Upper surface sericeous in lustre, more shining beneath, deep black throughout; head opaque, feebly and broadly impressed, finely and very sparsely punctate; antennæ very stout; prothorax two-fifths wider than long, much narrowed before the middle, the apex scarcely more than two-thirds as wide as the base, deeply, circularly sinuate, the angles bluntly rounded at tip; sides broadly arcuate, gradually sinuato-everted basally, the angles very acute; surface feebly convex, moderately coarsely, closely but unevenly punctate, the punctures scarcely asperate, each with a minute pale hair, broadly and gradually concavo-explanate and rugose laterally, the edge strongly reflexed, rather thick, punctate; elytra three-fourths longer than wide, equal in width to the base of the prothorax, parallel, the sides straight, gradually rounding inward posteriorly from the middle, the apical lobe large, short and feebly differentiated; surface rather strongly convex, sericeo-opaque, each with about three broad and very irregular, shallow, suberoded furrows, separated by wider feeble irregular convexities and with numerous large shallow irregular indents, the minute punctures moderately sparse, finely but very strongly granuliferous, the hairs excessively short and barely discernible; abdomen shining, the extremely minute punctulation scarcely at all asperulate, the posterior punctures as usual; legs well developed, the tarsi rather long, nearly as in nitidula. Length (7) 16.0 mm.; width 6.9 mm. Colorado,—Schaupp.....tensa n. sp. Upper surface less convex, broader and more opaque, not sericeous....5 5—Form broadly oblong-oval, grayish-black, more shining and deeper black beneath; head broadly, feebly impressed, rather closely and strongly punctate anteriorly, more finely and sparsely on the vertex, each puncture with a short stout pale and subdecumbent hair; antennæ moderately stout; prothorax nearly as in tensa but shorter, three-fifths wider than long, rather feebly convex, somewhat coarsely, deeply, densely and more or less asperately punctate, very broadly and gradually reflexed and rugose laterally, the edge not very thick, each puncture with a very minute pale hair; apical angles blunt at

tip, the basal obliquely everted and acute; elytra one-half to three-fifths longer than wide, parallel, at the middle very slightly wider than the prothorax, the sides feebly arcuate, rounding inward and becoming rapidly oblique in posterior two-fifths, the side margins feebly reflexed basally as usual; surface with large irregular shallow indents, sometimes so arranged as to give an appearance of four or five feebly elevated longitudinal lines, the minute punctures rather close-set, asperulate, each with a very minute short seta; abdomen with minute anastomosing creases, punctate posteriorly; legs relatively somewhat short and slender. Length $(\circlearrowleft, \mathsf{P})$ 13.5–17.8 mm.; width 6.2–8.6 mm. Kansas, Colorado and Montana,—Austin, Knaus and others. [Asida opaca Say]............opaca Say.

6—Body very short and broad, grayish-black throughout, opaque, alutaceous beneath; head rather strongly, transversely impressed, somewhat strongly, closely punctate, the small pale hairs very distinct; prothorax formed and sculptured as in opaca, except that the sides at the middle are not broadly rounded but very obtusely subangulate, the acute basal angles less everted; elytra very short, only just visibly longer than wide, at base wider than any part of the prothorax, and, at the middle, fully a third wider than the median part of the latter, the sides parallel and broadly arcuate, rapidly rounding and converging in a little less than apical two-fifths, the apical lobe large and obtusely rounded but distinct; surface less convex than in any of the preceding species, in fact almost flat, the approximately four narrow tumid lines on each distinct, the minute granuliferous punctures sparse, each bearing the usual very minute pale seta; side margins somewhat reflexed throughout but more obviously toward base, the humeral angles obtuse, thickened and rounded; abdomen minutely but rather strongly sculptured, more punctured posteriorly as usual; legs slender, the tarsi rather long. Length (\vec{o}) 14.0 mm.; width 7.1 mm. New Mexico (Las Vegas).

abbreviata n. sp.

Body much narrower, similarly deep grayish-black and opaque, somewhat sericeous; head scarcely impressed, finely, sparsely punctate, the small hairs very distinct; prothorax smaller than in any other species,

nearly as in opaca but with the apical angles more acute, not blunt at tip, the sides evenly arcuate, very feebly sinuate basally, the basal angles very acute but not much everted except rather rapidly at tip; surface coarsely, densely but irregularly punctate, not very asperulate, the minute pale hairs distinct, the concave lateral part more coarsely and differently punctate and rugose as usual; apex much narrower than the base; elytra nearly two-thirds longer than wide, at base much wider than the prothorax, and, at the middle, two-fifths wider than the latter, much more gradually obliquely narrowed in apical two-fifths than in abbreviata or opaca, the surface more convex than in the former, as in opaca throughout, the longitudinal irregular tumid lines much less distinct, broader and less numerous than in abbreviata, the sides parallel and broadly arcuate, the side margin acutely cariniform but not reflexed except basally, not much thickened at the humeri; abdomen almost opaque, shining and punctate apically; legs slender, not quite so long. Length (σ) 13.7 mm.; width 6.3 mm. Colorado (Salida),—Wickham.

servilis n. sp.

7—Prothorax very widely reflexed at the sides throughout the length. Form broad, oblong, very opaque, brownish-black, sometimes besmeared with earthy matter to a rather greater extent than opaca; head rather broadly impressed transversely, finely, rather sparsely punctate, with distinct pale hairs; prothorax large, very transverse, fully two-thirds wider than long, fully as wide as the elytra (σ) to slightly narrower (2), at apex scarcely more than three-fifths as wide as at base, very deeply, circularly sinuate, the angles bluntly rounded at tip: sides strongly, evenly arcuate to the tips of the apical angles, converging much anteriorly, parallel and broadly sinuate basally, the angles acute and obliquely prominent; surface broadly and moderately convex, densely punctate but not so coarsely as in opaca, the punctures asperulate, bearing each a minute and rather stouter pale seta; broad lateral concavity coarsely punctato-rugose, the strongly reflexed edge rather thin; elytra a third to two-fifths longer than wide, the sides gradually rounding inward posteriorly from slightly behind (\mathcal{O}) to slightly before (\mathcal{O}) the middle, obtusely ogival at apex, the lobe but feebly differentiated; surface but slightly and very unevenly undulated, sometimes with the usual longitudinal lines distinctly suggested, the rather sparse and very minute asperulate punctures each with the usual minute pale seta, the cariniform lateral margin very evidently reflexed throughout, strongly so and thickened at the humeri; abdomen alutaceous, with very minute anastomosing creases, the fifth segment dull and asperulately punctate, shining and strongly punctate only at apex; legs as usual. Length (♂, ♀) 13.9-16.0 mm.; width 7.2-8.4 mm. New Mexico (Cloudcroft),—Knaus.....immunda n. sp.

Prothorax less widely and not quite so strongly reflexed, more narrowly so anteriorly than posteriorly, the conformation as in *opaca* throughout. Form broad and short, more oboval than in *immunda*, blackish-pice-ous, not quite so densely opaque but even more prone to be coated

with earthy matter; head moderately impressed and punctured, the pale hairs stout; prothorax fully two-thirds wider than long, nearly as wide as the elytra (\emptyset^1) to decidedly narrower (\mathcal{P}) , rather wider at the middle than at the basal angles, the latter acute and posteriorly prominent but scarcely at all everted, the sides rather strongly, evenly arcuate, more converging anteriorly to the acute and seldom very evidently blunted apical angles, the apex three-fifths as wide as the base, less deeply sinuate than in immunda; surface similar but becoming coarsely punctato-rugose medially in the female, though not in the male; elytra short, barely two-fifths longer than wide, the parallel sides more strongly arcuate than in the preceding species, rounding inward posteriorly behind the middle, the apical lobe moderately differentiated; surface rather less flat, each with about four close-set irregularly sinuous unduliform and feebly tumid lines, the side margins reflexed throughout, strongly toward base but not much thickened; abdomen more shining than in immunda, punctate apically; legs rather more slender. Length $(\mathcal{O}^1, \mathcal{O}^1)$ 15.0-16.0 mm.; width 7.7-8.5 mm. New Mexico (Magdalena Mts.),-Snow.

cœnosa n. sp.

It is highly probable that nitidula and tensa are related to mancipata, in spite of the very different type of elytral sculpture inferable from the original description of the latter species, and, as nitidula is certainly a member of the opaca group, very evidently connected with the more normal species through tensa, it follows, if this surmise is correct, that mancipata is also a member of the obaca group and that a special group for that species is unnecessary. The finely and sparsely punctate head and three irregular elytral ridges, united transversely by anastomosing reticulation, stated of mancipata, coupled with the broader elytral base, would indicate that it cannot be a modification of *nitidula*, but as in *tensa* the head is finely and sparsely punctate and the elytra may be conceived to have each three broad and feebly elevated lines, it is supposable that mancipata may be related more closely to tensa than to nitidula; but tensa has the elytra no wider at base than the prothorax and the elytral ridges are separated by feeble irregular and equally wide depressed lines, or rather depressions caused by the more lineiform arrangement of the very irregular indentations and in no way united by reticulation. Grant Co., New Mexico, the locality of mancipata, lies in the extreme southwestern angle of the territory, about 200 miles south of Fort Wingate, McKinley Co. The Kansas specimens of opaca are obviously flatter in the elytra than the Colorado specimens and may be subspecifically different. The Mexican species described by Champion under the name *Asidi forreri*, probably belongs to this *opaca* group of *Asidopsis*, as does quite certainly the following, although having aberrant basal thoracic angles:

Form nearly as in opaca but more elongate, deep grayish-black, opaque, glabrous, the hairs of the elytra not discernible under a hand lens; head very feebly impressed transversely, rather coarsely but sparsely and not deeply punctate posteriorly, finely and sparsely so anteriorly, each puncture with a small stiff seta which is black (\mathcal{O}^1) or pale (\mathcal{O}^1); prothorax a fourth to barely a third wider than long, the apex evidently narrower than the base, the sinus elliptical and not very deep, the angles slightly blunt at tip; sides very evenly and moderately arcuate from the apex of the basal to the apical angles, the base broadly arcuate, becoming rapidly very oblique at the sides, the angles very much produced posteriorly but not at all everted, rounded externally, acute at apex; surface moderately convex, rather coarsely and closely but not confluently or very deeply punctate, with two irregular smooth areas at each side, rather rapidly concave and moderately reflexed, with the sculpture coarser and more rugose at the sides, the edge smooth and punctate but rather thick and obtuse; median line slightly tumid at the base; each puncture bears a small stiff seta, darker in the male; scutellum more shining, not wider than long, acute, moderate in size; elytra fully one-half longer than wide, fully a third wider than the prothorax, at base distinctly wider than the thoracic base, the angles of the latter obliquely overreaching the intra-humeral surface; sides subparallel and feebly arcuate to nearly straight, gradually rounding posteriorly, the apex gradually acute and only moderately declivous; surface very feebly convex, each with four or five, sometimes reduced to three, very feeble obtuse ridges, feebly and remotely united transversely, the punctures rather large and close-set but shallow; side margins cariniform, slightly reflexed, strongly so and thickened at the humeri, extending almost to the apical angles; abdomen minutely, feebly chagrined and sparsely, almost imperceptibly punctulate; last palpal joint of the male rather large but virtually recti-triangular. Length (♂,♀) 18.0-19.0 mm.; width 8.0-9.0 mm. Mexico (La Borrega, Durango)..*durangoensis n. sp.

Differs from *opaca* in its relatively narrower and more elongate prothorax, with externally rounded and incurvate hind angles.

Group V—Type planata Horn.

In this group the elytra become flat as in some of the *opaca* group but differ from anything known there in being perfectly smooth and without the characteristic irregularly indented or undulate sculpture of *opaca* and its related forms. As in the case

of mancipata, constituting group III, I am compelled to simply quote the characters given in the original description of the single known species, which inhabits a geographic region far removed from that of the opaca group.

This species is still represented by the unique type.

Megasida n. gen.

This is one of the more characteristic genera of northern Mexico, being there represented by numerous species, only one of which has thus far been observed to come across our boundary in western Texas. The body is of large size, including some of the largest of the tribe. Megasida is evidently closely related to Asidina, Trichiasida and Asidopsis, but differs in its much larger mentum, which is transversely parallelogramic, with rounded sides, fitting closely against the obtuse sides of the buccal opening, the latter moderately deep; the gular pedestal is very wide and rather short. The last maxillary palpal joint is moderate in size and exactly rectitriangular in the male, as in the genera mentioned, the same joint in the female being still smaller and less than right angled at its point of attachment. The head, eyes, labrum and antennæ are of the same general type as in the preceding genera. The prosternum rapidly and almost vertically descends upon the anterior margin of the mesosternum, by which the genus can always be distinguished from the obsoleta group of Stethasida, to which it often bears a striking resemblance as noted by Mr. Champion. The legs are moderately long but rather slender, the anterior tibiæ very moderately everted and acute externally at apex, with a few serrules along the outer edge, and the tarsi are rather long and with

short sparse spinules beneath, as in the preceding genus. The assumed type of the genus may be described as follows:

Body rather stout, moderately inflated posteriorly, convex, shining, glabrous, deep black throughout; head and prothorax alutaceous, the former feebly impressed transversely, rather coarsely but sparsely punctate throughout, the antennæ (on) as long as the prothorax or shorter (9), rufo-piceous apically, with the rather long but sparse bristling setæ dark fulvous; prothorax one-half wider than long, the apex distinctly narrower than the base, deeply, circularly sinuate, with the angles acute and not blunt at apex, the sides rather strongly rounded medially, thence moderately converging and straighter anteriorly and less converging and broadly, feebly sinuate basally, the base transverse, posteriorly and obliquely sinuate at the sides, the angles acute and obliquely, moderately prominent; surface broadly, rather feebly convex, very finely and remotely punctulate, rather abruptly but not very widely though strongly reflexed at the sides, the sparse punctures there only a little stronger but with the surface transversely rugose toward the edge, which is rather thin and subeven; scutellum broadly triangular; elytra three-fifths longer than wide, widest slightly behind the middle, two-fifths (\emptyset) to nearly three-fifths (\mathbb{P}) wider than the prothorax, at base very slightly wider than the thoracic base, the sides arcuate, rapidly rounding in behind, the apical lobe large and distinct, obtusely rounded; surface strongly convex, even, shining, with rather coarse and remotely scattered punctures, the side margins somewhat angulate in section and distinct but not carinate to apical fourth, becoming cariniform and reflexed only at the humeri; under surface with rather coarse, sparse punctures throughout, becoming closer on the last segments of the abdomen; legs a little longer and stouter in the male than in the female. Length (σ^2, φ) 21.0-22.0 mm.; width 10.8-11.9 mm. Texas (El Paso). [Asida obliterata Champ.].....obliterata Champ.

The original description given by Mr. Champion extends to only two or three lines and was founded upon specimens taken at Paso del Norte, Mexico, just across the Rio Grande from El Paso; so I infer that the form described above, taken by Mr. Dunn, is the true *obliterata*. Besides this species, those described in the "Biologia" under the names *Asida rufipes, moricoides, fæda, tarda* and *latissima* by Mr. Champion, will also form part of the genus *Megasida*.

Stethasida n. gen.

This genus differs from any of the preceding, except the *Microschatia* section and *Astrotus*, in having the prosternum between the coxæ prominent at tip and not deflexed to the apical margin of the

mesosternum. This character is certainly an important one among the American members of the Asidini, though apparently of less definite value among the European representatives of the tribe, the importance of a character being determinable solely by its constancy and consistency. With a general habitus which is sufficiently uniform and readily recognizable, the body assumes two distinct forms, the species of the first group being more ventricose and larger than those of the second, glabrous in the former, sparsely covered with rather long erect setæ in the second; the elytra are strongly margined at the sides nearly to the apical angles and quite uniformly throughout the genus, but, singularly enough, the only species to exhibit any sign of discal costæ is the type named Pelecyphorus obsoletus, by LeConte, though just why it was placed in that genus is not clearly understood, as the fourth male maxillary palpal joint is sharply recti-triangular, while in the female it is acute at the angle of attachment, just as in all the preceding genera subsequent to Euschides in the table. The mentum is short and transversely obtrapezoidal, touching the sides of the buccal opening, which are moderately short, obtuse in the first group and rather acute at tip in the second. The base of the prothorax is truncate or broadly sinuate, the basal angles generally acute and sometimes obliquely prominent, the elytral base about as wide as the thoracic base and the humeral angles obtuse and usually rather blunt though evident, the reflexed cariniform margin not notably more elevated basally. The trochantin is well developed, the eyes, labrum and epistoma as in Euschides, the anterior tibiæ generally finely everted and acutely aciculate externally at apex, the legs and tarsi moderate; the antennæ are rather slender, with the tenth joint somewhat abruptly wider nearly as in Trichiasida. The two subgeneric groups may be defined as follows:

The first of these groups occurs in Arizona and southern California, but the second seems to be confined to the latter region and is more maritime, being particularly abundant near San Diego.

Group I-Type obsoleta Lec.

This group is moderately rich in species and considerably diversified, the elytra are rather uniformly and finely granulate throughout, the granules becoming still more minute and more or less simple punctures suturally; the tibiæ are subcylindric as in *Pelecyphorus*.

- 2—Prothorax rather well developed, always much more than half as wide as the elytra; legs of the usual length and moderately slender. Head feebly impressed, not coarsely, somewhat closely punctate, the antennæ slender and short, piceous-black; prothorax moderately, the elytra more strongly, shining, the former black, subparallel, with broadly rounded sides, becoming sinuate at the prominent and slightly everted basal angles, about a fourth wider than long, the apex generally but little narrower than the base, moderately deeply. sinuate; punctures usually rather strong, deep and close, the surface broadly reflexed and concave and more coarsely punctate at the sides, feebly, transversely impressed along the basal margin; elytra black or very nearly, two-fifths to one-half wider than the prothorax and two and one-half to nearly three times (Q) as long, oblong-oval, the sides broadly, subevenly arcuate, the apical lobe well developed. Length $(\emptyset, 9)$ 13.7-17.0 mm.; width 7.3-8.5 mm. (California— Bolcan Mt., 5000 feet elevation, near Julian, San Diego Co.),— Ricksecker. [Pelecyphorus obsoletus Lec.].....obsoleta Lec.
 - A—Larger and broader than *obsoleta*, black, rather shining, the head transversely impressed and also with a rounded posterior impression as in the preceding, strongly but more loosely punctate; prothorax larger and broader, two-fifths wider than long, more narrowed at apex and with more rounded sides, less sinuate near the hind angles, otherwise similar; elytra broader and more oblong, rather less convex, each with three distinct costuliform lines, rather more rounded toward the humeri. Length 19.0 mm.; width 9.4 mm. California (Bolcan Mt., 5000 feet).

3—Sides of the prothorax rather broadly concave and gradually, though more or less strongly, reflexed as in the preceding species.....4

4—Legs and especially the tarsi unusually stout; lateral edges of the prothorax distinctly thicker. Body stout, deep black throughout, subopaque, the elytra slightly shining especially suturally and on the broad inflexed sides; head feebly, transversely impressed, coarsely, somewhat closely punctate, with a deep impression at the middle of the vertex; prothorax fully one-half wider than the median length, the apex much narrower than the base, very deeply, circularly sinuate, the angles acute, not blunt at tip; sides strongly, subevenly arcuate from the apical angles to the very feeble sinuation before the basal angles, which are acute and slightly prominent; base posteriorly suboblique laterally, the surface flat, with a very strong and transversely arcuate tumescent swelling at about basal third, coarsely, deeply and very closely but not coalescently punctate, more sparsely on the anterior transversely sinuate slope of the ridge and sparsely as well as more coarsely toward the sides, the edges densely, rugosely punctate; elytra oblong-oval, parallel, widest at the middle, nearly one-half longer than wide, almost one-half wider than the prothorax, the sides evenly arcuate, rapidly rounding basally and similarly so apically, the apical lobe broad, obtuse, rather distinct; upturned margin rather thick and uneven, the surface but very feebly convex, with two feebly impressed furrows on each, also somewhat transversely creased, the granules very distinct laterally; inflexed sides finely, sparsely granulose; abdomen somewhat shining, slightly crumpled, finely, rather sparsely, subasperately punctate; legs as usual, very strongly, densely sculptured and with very short stiff hairs. Length (♂) 18.0 mm.; width 8.9 mm. California.....torpida n. sp.

Legs unusually stout, the tarsi long and relatively very slender. Body more corpulent than usual, black, feebly shining, the elytra slightly picescent and rather strongly shining; head broadly and feebly impressed transversely, strongly and closely punctate; antennæ slender, about as long as the prothorax, the third joint one-half longer than the fourth; prothorax subparallel, with broadly rounded sides be-

6—Body deep black throughout and only moderately shining, nearly as in *obsoleta* but relatively more parallel, convex and subcylindric, the elytra each with one or two fine irregular subimpressed lines toward the suture; head strongly, rather loosely punctate, deeply impressed transversely in but little more than median half, the vertexal pit distinct; prothorax fully a third wider than long, strongly, subprominently rounded at the sides at about the middle, the sides converging and becoming straight to the acute basal angles, feebly arcuate and strongly converging to the anteriorly prominent acute apical angles, the surface transversely convex near basal third and, anteriorly, feebly impressed sublaterally; elytra three-fifths to three-fourths longer than wide, subevenly oval. Length 16.3–17.5 mm.; width 7.3–7.7 mm. California (Bolcan Mt., 5000 feet),—Ricksecker.

longula n. sp.

Body black, feebly shining, the elytra dark rufo-piceous and strongly lustrous; form much stouter, less convex and less cylindric than in longula; head moderately punctate, not deeply impressed transversely in median two-thirds, the vertexal pit shallow; antennæ short and only moderately slender; prothorax large, nearly two-fifths wider than long, otherwise nearly as in the preceding, except that the converging sides become sinuate in front of the prominent basal angles, the surface similar and rather strongly, closely punctate; elytra but little more than one-half longer than wide, subevenly oval, almost imperceptibly wider behind the middle, two-fifths wider than the prothorax and two and two-thirds times as long, the apical lobe stronger and more differentiated than in longula. Length 19.5 mm.; width 9.3 mm. Southern California,—Dunn.

convergens n. sp.

7—Form rather stout and moderately convex, black or blackish, feebly, the elytra moderately, shining; head feebly impressed transversely in but little more than median half, rather finely to more strongly, somewhat closely punctured, the vertexal pit obsolescent typically; prothorax but slightly wider than long, subparallel, with more or

Form more slender than in adumbrata and less cuneiform than in occulta, piceous-black throughout, alutaceous, the elytra slightly shining; head well impressed, coarsely and sparsely punctate; prothorax parallel, with rather arcuate sides and very acute prominent apical angles, the deeply sinuate apex slightly narrower than the base; surface very strongly, transversely tumid near basal third, very abruptly, strongly, almost vertically reflexed at the sides, the punctures rather small and well separated, the interspaces very minutely, closely and unevenly punctulate; elytra (σ) three-fifths longer than wide, nearly four-fifths wider behind the middle than at base and three-fifths wider than the prothorax, the sides very evenly arcuate, the apical lobe very large and broad but not well defined; surface nearly as in adumbrata; abdomen rather closely and strongly, asperately punctulate; legs long, the tarsi longer than in any other species, the posterior three-fifths as long as the tibia, with the basal joint half as long as the median line of the prothorax. Length (σ^1) 17.5 mm.; width 8.0 mm. California (without indication of locality or collector).....tarsalis n. sp.

Form more slender and more cuneiform, more shining, rufo-ferruginous in color throughout—possibly to some extent from immaturity; head rather strongly, transversely impressed and centrally pitted, the punctures rather coarser than usual, deep, moderately close-set; prothorax relatively much smaller than in the preceding, about a fifth wider than long, apparently even a little wider at apex than at base, the basal angles prominent, the sides broadly and feebly arcuate, sinuate basally, the surface nearly as in the preceding; elytra three-fifths longer than wide, subcuneiform, decidedly wider well behind the middle than elsewhere, the sides thence subevenly converging and feebly arcuate to the base, the short sublateral carinule represented by a series of small and widely separated tubercles, these being never more than very feebly developed in adumbrata; apical slope very steep, the lobe short but abrupt. Length 15.5 mm.; width posteriorly 7.8 mm. Arizona.....occulta n. sp.

8—Body small in size and notably ventricose, black; head and pronotum dull, the former rather feebly impressed transversely and at the middle of the vertex, the punctures moderately large, well separated; prothorax small, about a fifth wider than the median length, the apex almost as wide as the base, elliptically and only moderately deeply sinuate, the angles moderately advanced and acute; sides rather feebly, subevenly arcuate throughout but becoming sinuate

at the basal angles, which are very acute, everted and obliquely prominent; surface transversely tumid behind the middle, thence gradually sloping and nearly flat, with two feeble impressions at each side, to the apex, rapidly and convexly sloping basally, the punctures relatively rather coarse, deep and moderately close; sides thin, not much more coarsely punctate and rugose; elytra barely one-half longer than wide, four-fifths wider than the prothorax, evenly oval, widest at the middle, the sides evenly arcuate to the obtuse but only slightly blunt humeri, not very rapidly rounding. behind, the apical lobe large, obtuse and but feebly differentiated; surface of each nearly flat but sloping upward to the suture from the moderately thick margins, almost vertically declivous behind, smooth, alutaceous, each with two fine vestigial costules, the granules laterally very distinct; abdomen unusually finely and sparsely, subasperately punctulate, very finely punctate apically; tarsi very slender. Length (9) 13.7 mm.; width 7.0 mm. California (Colorado River, San Diego Co.),—Fuchs.....unica n. sp.

The apical lobe referred to is the apex of the elytra as seen from a viewpoint vertically above, and results from the overhanging of the bulging posterior flanks; this apical lobe sometimes becomes very conspicuous and is occasionally very nearly obsolete as in some examples of *adumbrata*; it is not of very much importance taxonomically. *Obsoleta* is represented in my collection by a rather homogeneous series of twenty-two specimens, and I fail to note any one that might be considered a bond with either *expansa*, *brevipes* or *longula*.

Group II—Type muricatula Lec.

The species of this group are almost as numerous as those of the *obsoleta* group; they are much smaller and especially more slender and parallel in form, and present an equally difficult and uncertain taxonomic problem. The prothorax is seldom much narrower than the elytra, the latter smooth, though as in the preceding group, sparsely granulose, the granules however being larger, each bearing a longer or shorter erect seta, the length of which is to some extent proportional to the size of the granule, the latter differing in size among themselves more evidently than in group I. The sexes do not differ very much, the male being somewhat smaller and more abbreviated as a rule than the female; but the maxillary palpi are notably small and feeble in both sexes. I would propose the following seven species and two subspecies:

T. L. Casey, Mem. Col. III, March, 1912.

Elytra cylindrically convex2
Elytra notably depressed, broadly and but feebly convex from one side
margin to the other; body unusually small in size; erect hairs of the
elytra shorter than usual and not so conspicuous

2—Basal angles of the prothorax everted and prominent, very acute. Body relatively rather stouter and large in size, very convex, moderately dark brown, the elytra pale brownish-rufous; head moderately impressed transversely and at the middle of the vertex, opaculate, rather coarsely, closely punctate; antennæ short and slender; prothorax large, very nearly as wide as the elytra, two-fifths wider than the median length, widest slightly behind the middle, the apex only moderately and elliptically sinuate, evidently narrower than the base, the angles not much advanced and slightly acute, not blunt; sides strongly arcuate behind the middle, converging basally and sinuate before the angles; base truncate, broadly, feebly sinuate laterally; surface moderately convex behind the middle and medially thence anteriorly with a distinct impression at each side before the middle, the base somewhat flatter, strongly, closely and perforately punctate, each puncture with a small yellow hair, gradually rather widely and strongly reflexed, coarsely punctate and rugose laterally, the edge thin, granose, the surface opaculate, polished laterally; elytra four-fifths longer than wide, parallel, widest at the middle, the sides very evenly arcuate, the humeri obtuse but not rounded, the apex gradually ogival; surface very convex, steeply declivous behind, very highly polished throughout, the granules very sparse, strong, the setæ only moderate in length; side margin thin, serrulatogranose; abdomen convex, shining, finely, sparsely and subasperately punctulate and with short pale inclined hairs; legs rather short, strongly rugose and with short stiff inclined pale hairs; prosternum coarsely, closely punctate, the propleura much more finely and sparsely; meso- and metapleura with perforate punctures. Length (♀) 15.7 mm.; width 6.4 mm. California....stricta n. sp.

4—Body stouter than in any other species, brown, the elytra a little paler and more rufous; head rather shining and well impressed, coarsely, perforately, unevenly punctate; prothorax very large, almost as wide as the elytra, fully one-half wider than the median length, the apex much narrower than the base, deeply, circularly sinuate, the angles right; sides strongly, evenly arcuate to the apex and to the basal angles, which are right; base sinuously oblique at the sides; surface subevenly but rather feebly convex, faintly alutaceous, feebly impressed at each side of the middle near the apex, rather coarsely, perforately punctate, densely so on the posterior slope, the sides broadly and gradually, very strongly reflexed, polished, coarsely punctate and rugose, the edge thin and strongly granulo-serrate; elytra evidently widest at two-thirds, three-fourths longer than

wide, moderately obtuse posteriorly, the apex rather prominent and ogival; sides feebly converging and slightly arcuate to the obtuse and rather rounded humeral angles; surface polished, with the tubercles unusually numerous and strong, mingled with many others which are smaller and feebler, the side margins only very moderately elevated, very uneven and granose; erect setæ rather long; abdomen with small, strong, imbricate reticulations, with a minute acute puncture at the posterior end of each imbrication, shining, the pale hairs very short; prosternum coarsely, tubercularly rugose. Length (3) 11.5 mm.; width 7.0 mm. Southern California,—Sanford.

pertinax n. sp. Body less stout and duller, dark blackish-brown to ferruginous in color; head moderately impressed transversely and on the vertex, dull, coarsely and very densely punctate throughout; prothorax moderate, one-half wider than long, nearly as in pertinax in outline, except that the apex is much less deeply though circularly sinuate and less greatly narrower than the base, and that the basal angles are extremely feebly everted though right, the surface much more strongly tumid transversely at basal third, impressed just behind the middle at each side of the moderate anterior convexity, rather coarsely, perforately and densely but not coalescently cribrate throughout, the side margins broadly and gradually but much less strongly reflexed, coarsely and densely punctato-rugose, the edge strongly serrulate; elytra four-fifths longer than wide (♀), a little shorter (8), nearly a fourth to fully a third wider than the prothorax, parallel (\mathcal{O}) or slightly posteriorly enlarged (\mathcal{O}) , the sides moderately and evenly arcuate, the apex obtuse, very steeply declivous, the apical lobe moderate though evidently differentiated; surface of each with traces of two obtuse discal ridges, shining when clean but usually with a thin opaque indument, the tubercles rather sparse, strong and fine intermingled, the erect setæ moderate, the margins moderately elevated and feebly serrulate; abdomen nearly smooth, finely, asperulately punctulate (♀) or strongly so medially, becoming nearly smooth laterally (\eth) . Length (\eth, \diamondsuit) 13.0-16.0 mm.; width 5.6-6.6 mm. California. [Pelecyphorus muricatulus Lec.].....muricatula Lec.

A—Much more slender and parallel than *muricatula*, though very similar otherwise, except that the elytra (\$\sigma^1\$) are only between a third and fourth wider than the prothorax and, instead of being limited at the sides of the upper surface by a definite reflexed cariniform line as is usually the case, this marginal line becomes obsolescent and is represented only by a series of small irregular tubercles along the summit of the acutely subprominent margin. Length (\$\sigma^1\$) 13.5 mm.; width 5.4 mm. Southern California.

languida n. subsp. 5—Sides of the prothorax strongly oblique and converging posteriorly; side margins of the elytra simply acute, bearing isolated irregular tubercles somewhat as in languida. Form moderately stout, somewhat ventricose, very convex, dull in lustre, black throughout;

head moderately impressed, coarsely but not very closely punctate; prothorax two-fifths wider than the median length, widest slightly before the middle, the sides strongly arcuate, gradually unusually strongly convergent, becoming broadly and very feebly sinuate, basally; apex about as wide as the base, moderately sinuate, the sinus somewhat angulate at the middle, the angles acute; basal angles right, sharp; surface somewhat shining, feebly convex, markedly declivous basally, feebly impressed at each side in more than apical half, coarsely, very closely punctate, rather broadly explanate, very coarsely punctate and granularly rugose laterally, the edge thicker than usual and only very slightly and gradually reflexed, granose and uneven; pale hairs very small, long and bristling at the sides; scutellum small, as long as wide, very acute; elytra evenly oval, parallel, nearly four-fifths longer than wide, almost one-half wider than the prothorax, the sides evenly arcuate; apex steeply declivous and rather gradually parabolic; surface strongly convex, the granules sparse but strong, the setæ long; side margins very narrowly declivo-explanate, costiform, closely, confusedly granose; abdomen finely but strongly asperulate, closely so medially, less closely though not very sparsely laterally; legs very short, rather stout; last palpal joint very pale as usual, exactly recti-triangular in the type. Length (d) 14.4 mm.; width 5.9 mm. California.....socors n. sp.

6—Body subcylindrically convex, dark brown in color, the elytra paler brown; head moderately impressed transversely and on the vertex, the punctures rather coarse, well separated: prothorax small, between a fourth and fifth wider than long, the apex fully equal in width to the base, only moderately deeply, elliptically sinuate, the angles slightly acute; sides rounded at or before the middle, gradually converging, becoming broadly and feebly sinuate to the basal angles, which are right and sharp; surface rather feebly convex, more or less impressed at each side before basal third, rapidly declivous posteriorly, coarsely, more or less closely punctate, rather abruptly strongly reflexed and coarsely punctato-rugose at the sides, the thin edges strongly serrulate; scutellum acute, about as long as wide; elytra two-thirds to three-fourths longer than wide, not very obtuse but very steeply declivous behind, a third to nearly two-fifths wider than the prothorax, very strongly convex, more or less shining, sparsely, unevenly granose, the side margins moderately reflexed, thin, strongly granose, the setæ only moderately long; abdomen finely, asperulately punctate, more closely toward the middle in the male, the pale hairs short. Length $(\emptyset^1, \mathcal{Q})$ 11.8-12.8 mm.; width 5.2-5.7 mm. California (San Diego Co.). [Asida angustula Csy.].....angustula Csy.

A—Body similarly small and slender though more parallel, the prothorax but scarcely visibly narrower than the elytra, blackish-

inepta n. subsp.

brown throughout; head deeply impressed transversely and on the vertex, rather closely punctate, coarsely so anteriorly, less coarsely thence to the base; prothorax short, fully one-half wider than long, the apex evidently narrower than the base, not very deeply, elliptically sinuate, the angles slightly acute, sharp; sides evenly and strongly arcuate from the apical angles, barely becoming straight at the basal angles, which are right and very sharply defined; surface and sides nearly as in angustula but not so evidently impressed and with the margins narrowly but not quite so strongly reflexed, the median parts duller in lustre and the small pale hairs more distinct; scutellum a little broader; elytra narrower and less arcuate at the sides, parallel, four-fifths longer than wide, not quite so convex, similarly parabolic at tip and steeply decliyous, the sparse granules much smaller, the erect hairs shorter: abdomen distinctly, rather closely, evenly and asperately punctulate throughout; prosternum sparsely punctate. Length (♀) 12.8 mm.; width 4.8 mm. California (San Diego Co.).

of the genus, very convex and subparallel, moderately shining and rather pale ferruginous-brown throughout; head distinctly impressed transversely and deeply so at the middle of the vertex, the punctures coarse, deep, generally well separated; prothorax small, but little more than a fifth wider than long, throughout nearly as in angustula and about as wide at apex as at base but with the basal angles minutely everted and acutely dentiform, the thin and strongly reflexed edges more coarsely crenulate; elytra about twice as long as wide, one-half wider than the prothorax and between three and four times as long, obtusely parabolic and steeply declivous behind, the sides parallel, very feebly arcuate, rounding more basally and rapidly rounding apically; surface very convex, subcylindric, the granules very sparse but rather strong, the erect setæ long; side margins only slightly reflexed, moderately thin, strongly granulo-

serrate; abdomen subopaque, rather coarsely, very strongly granulo-asperate throughout, the pale hairs unusually long and very conspicuous; legs rather short, slender. Length (9) 13.8 mm.; width

Body narrow and very elongate, much more slender than any other species

thin and finely, irregularly crenulate; hairs small even along the edges; scutellum twice as wide as long, well developed, the tip very acute; elytra two-thirds longer than wide, scarcely a fourth wider than the prothorax, parallel, rapidly very broadly ogival and obtuse behind, the sides evenly and rather feebly arcuate, surface polished, the granules moderately sparse, not very large, mingled larger and smaller; lateral margins rather strongly elevated, not very thin, densely, granularly rugose; abdomen shining, finely but strongly, closely asperato-rugulose, less densely toward the sides; legs moderate, rather stout. Length (3) 11.0-11.8 mm.; width 4.8-5.0 mm. Southern California,—Sanford and Schaupp.....vegrandis n. sp.

The individuals of the various species in this group of Stethasida seem to be solitary in habits to a considerable degree, and it is therefore but seldom that series can be taken in any one locality. For this reason the set of nine specimens of muricatula in my collection is not very homogeneous, and forms, seemingly varietal, could readily be set aside from it; but it would be of slight utility to attempt this at present. In stating angustula to be simply the male of muricatula, Dr. Horn neglected to even cursorily examine the types; for, if he had done so, he could not have avoided perceiving that the original type of angustula is itself a female. This species, in point of fact, bears no close resemblance to muricatula, except in the general characters of the group, and there can be no doubt of its validity. The genitalia are seldom even partially visible externally in this group and the male and female differ but little in outward appearance or in the maxillary palpi. When males and females are both present in a series, the sexes can be recognized very easily by differences in the length of the hind tarsi, the latter always being longer in the male.